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ABSTRACT

The monograph was designed for special educators working with the severely mentally retarded and it examines methods of providing vocational training and educational opportunities for this population. The first chapter, by D. Biklen and G. Dybwad ("A Perspective on the Social and Cultural History of Severely and Profoundly Mentally Retarded Persons") describes developmental differences between the severely mentally retarded person and normal populations. In Chapter 2, "The Career Education Needs of Severely Mentally Retarded Persons" by D. Brolin, the concept of career education is expanded to include economic, social, and vocational fulfillment of retarded persons. "Developmentalism and Career Education: Their Relationship to Severely Mentally Retarded Persons" by S. Sellars explores the need for a philosophy of human development. D. Stoddard discusses "A Technical Strategy for Career Education and Career Development of Severely Mentally Retarded Persons" in the fourth chapter. In the final chapter W. Usdane considers the "Exploration of the Need for a Career Education and Career Development Specialist Program in Job Placement" with special populations. (Author/PHP)

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STRATEGIES FOR INCREASING CAREER EDUCATION AND OPPORTUNITIES

for Severely Mentally Retarded Persons

ED1962215

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PREFACE

A national effort to provide vocational training and educational opportunities for severely mentally retarded persons is well under way. This monograph contains concepts and insights significant for the effective development of that effort. The authors are to be commended on their unique contributions, since continued progress in the vocational development of severely mentally retarded persons is linked closely to professional insights of a creative nature.

The current focus on the developmental needs of severely mentally retarded persons has resulted in a number of innovative products which are promising for use in current treatment programs. This monograph may be viewed as one of those products.

The monograph will be of particular interest to special educators who provide services to severely mentally retarded persons, since it deals centrally with the social and cultural history of severely mentally retarded persons, their developmental needs, a newly emerging philosophy of developmental education, a validated educational technology, and a review of and proposal for changes in job placement procedures and roles, including the need for a career development specialist curriculum.

In addition to its unique focus, the comprehensiveness of the monograph makes it a meaningful addition to the professional literature that is contributing to new educational and developmental opportunities for severely handicapped persons. Further, its focus on the vocational issues surrounding severe mental retardation is timely, since only in recent years has that topic been considered significant by professional and lay persons alike.

The monograph is an important contribution to the continuing development of professional services available to handicapped persons. It is recommended reading for all human services professionals who serve individuals that are mentally retarded.

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INTRODUCTION

This monograph is unique because the needs of severely mentally retarded persons are uniquely different than those of other populations. For example, among normal populations, skill development within the behavioral domains of intellect, emotion, and motor performance is assumed, i.e., the individual identifies with and models after other individuals with whom he comes into contact. With severely mentally retarded persons, this is not usually the case, i.e., the development of skilled behavior cannot be assumed.

Because of the depth of behavioral deficits among the retarded population, a comprehensive approach to development and instruction of that population is needed. This monograph presents such as an approach, with special emphasis on career education.

For example, in the first chapter, A Perspective on the Social and Cultural History of Severely and Profoundly Mentally Retarded Persons, Drs. Biklen and Dybwad describe a number of developmental "differences" between normal populations and the severely and profoundly retarded populations. First, they explore differences in developmental experiences among the two populations. Second, Drs. Biklen and Dybwad present the institutionalization history of retarded persons and the social policies which resulted in their exclusion from society. Finally, the authors cite the appropriateness of the current move toward career education of mentally handicapped persons, proposing this as a legal and social right.

In CHAPTER TWO, The Career Education Needs of Severely Mentally Retarded Persons, Dr. Donn Brolin expands the concept of career education to include the economic, social, and vocational fulfillment of retarded persons. Because of this, Dr. Brolin is clear that the career education needs of severely mentally retarded persons are qualitatively different from the needs of non-handicapped persons. Within this chapter, the career education needs of the handicapped population are described in detail. Finally, Dr. Brolin suggests that differences in needs may well be an area of exploration by career education policy planners.

In the third chapter, Developmentalism and Career Education: Their Relationship to Severely Mentally Retarded Persons, Dr. Sellars explores the need for a philosophy of human development which he has termed "Developmentalism". The developmentalism philosophy is postulated from the premise that most educational curricula that are designed for the instruction of retarded persons are in need of a philosophical foundation. And, since career education is one of those curricula, the need for a philosophical foundation is indicated.

Further, Dr. Sellars presents an educational technology, "Developmental Education", which has been designated as the 'hardware of education", i.e., educational processes that are used within educational contexts to deliver curricular content. Finally, Dr. Sellars describes a "Developmental Career Model" which connects and extends the concepts of career education and career development.

In CHAPTER FOUR, A Technical Strategy for Career Education and Career Development of Severely Mentally Retarded Persons, Dr. Denis Stoddard presents the rationale for and methodology of task analytic technology, an instructional approach that is particularly appropriate for use with mentally retarded individuals, especially severely and profoundly retarded persons.

The task analytic technology approach focuses the responsibility for learning on the educator, not the student. This approach to education is somewhat unusual, since evaluation of learning outcomes is focused on the educator as well as the learner; and, in the end, the educator is held most responsible.

The instructional strategy of task analytic technology is based on three aspects of the learning environment. The first aspect is content, i.e., the parts of the thing to be learned. The second aspect is method, i.e., the way in which the parts of a thing are joined together. For example, in most learning experiences, we find that there is more than one way to design or assemble the parts of an idea or object.

The third aspect of instructional strategy is process, i.e., the course of the teacher-student interaction within the learning experience. Dr. Stoddard concludes his presentation with the position that task analytic technology is the preferred mode of instruction in the career education of severely mentally retarded persons, due to its precision instructional attributes and its flexibility in format.

In the final chapter, Exploration of the Need for a Career Education and Career Development Specialist Program in Job Placement, Dr. William Usdane explores the history of the job placement specialist in regard to special populations. In Part One of the chapter, he proposes broadening the definition of the "Placement Specialist" by retitling the position as 'Career Development Specialist". Through these means, the specialist would assume responsibility for job placement and maintenance, career education, and career development, as well. In Part Two of the chapter, Dr. Usdane presents evidence from the professional literature in support of his proposal for a Career Development Specialist curriculum.

In summary, this monograph makes its appearance at a most propitious time, since its topics are current. Presently, professionals throughout the United States are conducting research and demonstration studies focused on the developmental aspects of severe mental retardation. Appropriately, this monograph deals with the career education aspects of that developmental process. By intention, the chapters of the monograph reflect the developmental approach. Since, in last analysis, we believe that career education is a developmental principle, and, as a guiding concept, should be fit to the developmental education needs of severely mentally retarded persons, whatever those needs may be.

S.G.S.
June, 1979

A PERSPECTIVE ON THE SOCIAL AND CULTURAL HISTORY OF SEVERELY AND PROFOUNDLY RETARDED PERSONS

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Dr. Biklen is currently Director, Center on Human Policy, Syracuse University. His present leadership in the human services is in the area of advocacy for children with disabilities. Dr. Biklen's academic interest focuses on "handicapism", an area in which he conducts research on forms of discrimination, prejudice, and stereotyping of individuals with disabilities. In 1979, Dr. Biklen was honored by the Journal of Exceptional Children through his appointment as Associate Editor. He is a member of the Legislative and Social Issues Committee of the American Association on Mental Deficiency, a member of the Council for Exceptional Children, and a member of the Society for Study of Social Problems. Dr. Biklen has attained recognition as a consultant and author in national policy as it pertains to handicapped populations.

Dr. Dybwad is currently Professor Emeritus of Human Development, Brandeis University and Adjunct Professor, the Center on Human Policy, Syracuse University. His present leadership and academic interests in the human services are focused on the legal aspects of disability and handicapping conditions, especially as they apply to social and vocational potentials of persons with severe disability. Dr. Dybwad was a pioneer in the use of the courts to safeguard the human and civil rights of handicapped individuals. He was influential in the Pennsylvania Association of Retarded Citizens' lawsuit which resulted in the Pennsylvania Right to Education Statute. In 1977, Dr. Dybwad was awarded the Doctor of Humane Letters Honorary Degree by Temple University. In 1976, he was made an Honorary Associate Fellow of the American Academy of Pediatrics. Dr. Dybwad has been President of the International League of Societies for the Mentally Handicapped. In addition, he is a Fellow of the American Orthopsychiatric Association. Dr. Dybwad is also an acknowledged, national expert in the legislative and legal influences which impact handicapped populations.

EDITOR'S NOTE:

In nearly all special populations, career education has had some kind of informal beginning. In scouting for example, individuals have had to master specific career information in order to earn certain merit badges. These informal beginnings of career education have not developed in all special populations, however. For example, severely mentally retarded persons have not had career education available to them. Further, almost without exception, they have not had any vocational training or career development experiences whatever.

In this chapter, Drs. Biklen and Dybwad trace for us the antecedents which have brought about a "left-out status" for severely mentally retarded persons. They review, also, psychometric classification systems which are the bases for labelling retarded persons by I.Q. level. In the past, if one has been labelled severely or profoundly mentally retarded, career education options have been virtually non-available to them.

In their discussion of the social and cultural history of severely mentally retarded persons, Drs. Biklen and Dybwad present the history of institutionalization and the social policies which resulted in "left-out status" for this population. They give special attention to the development of large institutions and the social policies which influenced that development, including legal, academic, and political influences.

Then, Drs. Biklen and Dybwad make a special case for the effects of those influences on the development of severely mentally retarded persons. Those influences include "normalization", the "least restrictive alternative", "mainstreaming", and "deinstitutionalization". The knowledgeable reader will recognize that set of concepts as "current vogue" in the treatment of the mentally retarded population. In the last several years, one might transform that quartet of treatment concepts into a sextet of concepts by including "task analytic technology" and "developmental psychology".

In their conclusion, Drs. Biklen and Dybwad encourage and support the current movement toward the career education of severely retarded persons. They link that movement directly with a newly espoused "right", the right to work, for special "left-out populations". Further, these authors suggest, sensitively, that an unconditional "right-to-work" must be a legislative mandate, in order to ensure the career development of mentally retarded persons. Drs. Biklen and Dybwad believe that once this mandate is achieved, career development will be a natural extension of career education, which it is now for non-handicapped populations. In this chapter, the social and cultural roots of that "natural extension" are described.

INTRODUCTION: CLASSIFICATIONS AND THEIR IMPLICATIONS

The 1952 edition of the American Psychiatric Association's Diagnostic and Statistical Manual had the following to say in a section on mental deficiency: "The degree of intellectual defect will be specified as mild, moderate, or severe, and the current IQ rating, with the name of the test used, will be added to the diagnosis. In general, mild refers to functional (vocational) impairment as would be expected with IQ's of approximately 70 to 85; moderate is used for functional impairment requiring special

training and guidance, such as would be expected with IQ's of about 50 to 70; severe refers to the functional impairment requiring custodial or complete protective care, as would be expected with IQ's below 50" (emphasis added).

One has to be aware of this psychiatric classification which so sweepingly denied any functional or rehabilitative potential to anyone with an IQ below 50, in order to appreciate the radical change in the conceptualization of mental retardation introduced seven years later by the American Association on Mental Deficiency through publication of its Manual On Terminology and Classification in Mental Retardation (AAMD, 1959). In the first place, it provided a new definition of mental intelligence, but required, also, the presence of an impairment in adaptive behavior. This change in definition was a significant departure from the traditional dependence on IQ, the "Intelligence Quotient" alone, as the measure of mental retardation.

Secondly, the new AAMD Manual introduced a five-level classification scheme, corresponding to five standard deviations from the norm of an intelligence test. While the "Psychiatric Classification" recognized only one level of IQ below 50 (severe), the AAMD Manual established three levels of mental retardation within that range: profound, severe, and moderate, which are five, four, and three standard deviations below the norm, respectively. In other words, AAMD recognized the need to approach this group with a greater sensitivity to the wide range of abilities it represented. In addition, The AAMD Manual used the term "mild" to describe that population which the psychiatric classification referred to as "moderate" and used the term "borderline" for what had been called "mild". Under mounting pressure from parents and progressive professional workers, this new AAMD scheme of classification and nomenclature was introduced into the public schools. From this approach, there were discernable benefits, once the scheme and the interplay between measured intelligence and adaptive behavior were understood.

As those youngsters with moderate retardation slowly gained access to special classes in the public schools, the facilities they had vacated could now be used for training of the severe/profound group of mentally retarded persons. From this, professionals and other persons were able to observe that previously expressed opinions regarding their ineducability were off the mark.

Similarly, within occupation centers and sheltered workshops, adults who had been previously judged as incapable of any type of structured work activity, proved that with proper coaching and support, they could perform tasks of increasing complexity.

From these findings, the field of mental retardation began to shift some of its attention to that population which the Psychiatric Manual had described as requiring no more than custodial or complete protective care. On the other hand, there were those who felt that the AAMD's own "borderline" group were, in the vast majority, individuals who had certain problems in learning and functioning, but who should not be considered as retarded. This view was expressed strongly in 1967 by an expert committee of the World Health Organization and was reiterated subsequently by the American Association on Mental Deficiency, which in the 1973 revision of its Manual of Terminology and Classification dropped, altogether, the classification of "borderline" (AAMD, 1973).

In the same year, after two Presidential vetoes, Congress passed the Rehabilitation Act of 1973, which, as a national policy, put a priority on service to the most severely handicapped individuals. Two years later, the Education of All Handicapped Children Act (P.L. 94-142) set a new national goal of an all-inclusive school system which mandated for the first time ever that profoundly retarded children benefit from an appropriate program of education.

RESEARCH, IDEOLOGY, AND PRACTICE

The field of mental retardation is one in which we would expect that science and scientifically derived knowledge would prevail. That is, one would assume that teachers, program planners, and other human service specialists would look to scientific research for clues to the best educational and habilitation strategies. In fact, we do look to research for guidance in much of what we do under the broad rubric of the human services. Yet a tension exists. On the one hand, preliminary ideologies of a particular time may limit either the type of research undertaken or the receptivity granted certain research findings by human service practitioners of that period. In addition, research has definite limitations and not infrequently presents conflicting findings, which is not surprising if one considers the complexity of issues in assessing mental retardation strategies. Still, we must act on hope, belief, ideology, custom, and common sense. The tension between what we "know" and what we "believe" manifests itself in each of the burning issues of our day: in "mainstreaming", in "deinstitutionalization", and the prevailing concepts behind both trends, the "least restrictive alternative" and "normalization".

Take for example, the debates over special education and deinstitutionalization. Should we look to scientific research to decide whether deinstitutionalization is a good idea? Edward Zigler, a prominent professor, researcher, and former government official in the field, testified before Congress that:

> At the social policy level, the mental retardation field is in a state of flux and disarray. Some years ago, experts convinced decision makers that speical education was the solution to the problem of training the retarded. This view is now suspect and decision makers are committing themselves to such concepts as normalization and deinstitutionalization. I join with those many senior workers in the field who view these concepts as little more than slogans that are badly in need of an empirical data base. Yet we now find states passing laws mandating mainstreaming for retarded youngsters and substituting small regional centers for the larger state institutions. But where are the data with which to wisely direct sound policy in this area? What is the best type of classroom for the retarded child, and what is the nature of the optimal institutional setting for those children who cannot remain with their families? We have no good answers for these questions. And yet the nation is already spending vast amounts on putting in place practices which the future may inform us were little more than passing fads. The only antidote we have for moving from fad to fad is careful research and evaluation efforts. (Zigler, 1973, p. 52)

Perhaps we are guided more by principles such as normalization, deinstitutionalization, mainstreaming, and the least restrictive alternative than by "hard empirical data". And perhaps that is as it should be. Perhaps it is essential and indeed unavoidable that societies learn to balance faith or ideology with science or fact finding. Perhaps it is inevitable that social science reflects, always, ideological points of view. We believe that the history or America's response to people classified as severely retarded demonstrates rather conclusively the inevitability of this. But we are not discouraged by that finding. Quite the opposite, we find good reason to be optimistic.

America's experience with institutions illustrates, as well as any single sphere of human services, the inextricable mix of ideology and fact. Albert Deutsch (1949) charted the history of this experience in his book, The Mentally Ill in America. At first, institutions were conceived as progressive programs designed to offer habilitation. In regard to these treatment programs, Deustch quoted Wilbur, one of the originators of developmental habilitation:

> We do not propose to create or supply faculties absolutely wanting; nor to bring all grades of idiocy to the same standard of development or discipline; not to make them all capable of sustaining, creditably, all the relations of a social and moral life; but rather to give to dormant faculties the greatest practical development, and to apply those awakened faculties to an useful purpose under the control of an aroused and disciplined will. At the basis of all our efforts lies the principle that the human attributes of intelligence, sensibility, and will are not absolutely wanting in an idiot, but dormant and undeveloped. (Deutsch, 1949, p. 345)

This was an age of optimism. In Massachusetts, Dr. Samuel Gridley Howe founded the Massachusetts School for Idiotic and Feebleminded Youth. A few years later, a protege of Howe's, Dr. J.B. Richards established a similar facility in Pennsylvania, the Pennsylvania Training School for Feebleminded Children. Then, in the late 1850's and 1860's, institutions were begun in Ohio (1851), Connecticut (1857), Kentucky (1860), and Illinois (1865). As Deutsch explains, optimism about the educatability of people classified as retarded was most fervent among the early pioneers, individuals such as Howe, Richards, Wilbur, Sequin, and Kerlin. Some in society felt the whole enterprise was foolish. For example, Deutsch (1949) quotes one legislator who expressed doubt about Wilbur's plans: "Do not take it personal, but I must say that I think none but fools would think of teaching fools" (p. 346).

It was not long before the early optimism gave way to increasing pessimism. Custodialism was born. In their study of the American Association on Mental Deficiency's history, Drs. William Sloan and Harvey A. Stevens (1976) recalled that the first custodial institution began as an offshoot of Dr. Wilbur's institution at Syracuse, New York. This custodial facility was founded at nearby New York, New York. Here is their explanation:

> Rationale for the custodial institutions was that many residents of Syracuse Institution were capable of working in an useful occupation but had no homes. The custodial institution then was opened to give a home both to those who were capable

of working and also to the untrainable idiots who were incapable of doing anything. Thus, those who were capable of working could help in caring for the more helpless and, at the same time, have a home. (p. 121)

So began the first intentionally custodial institution and the first recorded instance of institutional peonage. By 1926, there were estimated to be 56 state institutions in 43 states serving over 50,000 retarded persons (Sloan and Stevens, 1976, p. 123). During these years of optimism and development, several debilitating belief systems came into being also. First came Darwin's Origin of Species (1859) and later the theories of social darwinsim which produced the widespread belief that little could be done to help individuals who were classified as retarded. Their fate at birth rendered them defective. Hopes for cures washed away as quickly as the original optimism of the early pioneers. A second and related notion that mentally retarded people were morally lacking and more prone to alcoholism, crime, and other social vices developed. Such thoughts prevailed until 1918, approximately, when those pessimistic ideologies began, then, to be questioned.

While notions about mental retardation and depravity were challenged, and while an interest in educating the retarded was renewed, the practice of institutionalizing retarded persons continued to grow. Even though institutions served only a fraction of the retarded population, including a fractional number of the severely retarded, institutionalization became the American mental retardation profession's primary response to the severely retarded.

Eventually, the institutions were to house more than 250,000 people. Dr. Wolf Wolfensberger in his historical account, The Origin and Nature of Our Institutional Models, summarized the monolithic reliance on institutions:

> It did not matter who or what the resident was, whether young or old, whether borderline or profoundly retarded; whether physically handicapped or physically sound; whether deaf or blind; whether rural or urban; whether from the local town or from 500 miles away; whether well-behaved or ill-behaved. We took them all, by the thousands, 5,000 and 6,000 in some institutions. We had all the answers in our plan, using the same facilities, the same personnel, the same attitudes, and largely the same treatment. (Wolfensberger, 1974, p. 69)

All of this happened in the absence of any evidence, to use Dr. Zigler's term, that institutions were the best way to meet the needs of society and, more specifically, of people classified as severely retarded. In the case of institutions, as in so many similar cases, America evolved a social policy that was reflective of the social and cultural beliefs that little could be done to assist the severely retarded, therefore, they were best (i.e., most efficiently) served in large custodial centers. The choice, historically, of choosing the institution as the dominant service model, was not one based on scientific findings. It can be regarded more appropriately as a moral or political choice, an act of faith. The programs were shaped, therefore, by the ideologies of the day.

This finding has been substantiated through three studies: Fernald's post-institutional study at Waverly (Fernald, 1916); Saenger's (1957) New York City study entitled "The Adjustment of Severely Retarded Adults in the Community"; and Bacon and Weil's (1955) study of the Hutterite Community, reported by Sarason and Gladwin (1958). From this, it may be seen that social policy for the severely retarded was then and is now based more on belief than science.

In 1916, Dr. Walter Fernald began the first of what have come to be known as after-care, post-institutionalization, or follow-up studies. His study was entitled "After-Care Study of the Patients Discharged from Waverly for a Period of Twenty-five Years". Dr. Fernald chose to examine the fate of 1,537 "discharges" from the institution at Waverly, Massachusetts, from 1890 to 1914.

Fernald stated his preconceptions candidly: "We honestly believed that nearly all of these people should remain in the institution indefinitely". Perhaps the most startling finding for Fernald and his era, a time in which retardation was being linked with crime, sexual immorality, and every other vice imaginable, was that those who left the institution were <u>not</u> particularly prone to antisocial behavior.

Of the original 1,537 potential subjects, 891 were discounted because they had been transferred to other institutions for the "feebleminded", hospitals for the insane, institutions for "epileptics", other custodial institutions, or had been sent out of state or could not be located. This left 646 subjects, 470 males or 176 females. Only a small number of these were classified as severely retarded.

Of the women in the study, "there were 23 cases classified at the imbecile and idiot grade who were maintained at home and were considered not capable of self support, or of doing anything but the most simple housework; two were unmarried mothers; two were troublesome sexually; six were noisy and troublesome; but the others seemed to be well cared for and protected by their relatives, without annoyance to neighbors or the family. The character of the home and the intelligence of the family largely determined the result (Fernald, 1919, p. 219-220).

Fernald found similar data for the men. "Fifty-nine males of idiot and imbecile grade, unable to do any work, were living at home, and the families seemed able and desirous of continuing the home care of their permanently infantile offspring. No serious obnoxiousness was reported by the families or by neighbors or by the police. As in the preceding group (males of low-moron and high-imbecile grade), evidently those of the group who had proven troublesome had already been sent back to the institution. Favorable home conditions and the absence of disagreeable traits in the patients made home care possible" (Fernald, 1919, p. 222).

Forty years after Fernald presented his report on what is called today "deinstitutionalization", Dr. Gerhardt Saenger (1957), a professor at New York University, published a report on <u>The Adjustment of Severely Retarded Adults in the Community</u>. Saenger's study looked at the experiences of former pupils with low I.Q.s who were in classes held by the Board of Education of New York City, 1929-1956. His findings substantiated a trend discovered by Fernald. The trend showed clearly that despite the dominant propensity within professional circles to support institutionalization as a

major social policy, many severely retarded people, indeed the vast majority, were adjusting to community living.

Admittedly, Saenger's sample population was not simply a cross-section of all severely retarded people in New York. Rather, he restricted his sample to former pupils who were above sixteen years of age and who were classified as severely retarded, all of whom had less than a 50 I.Q. (In current AAMD classification, this study included both moderately and severely retarded persons.) Also, all of the subjects had to have been capable of caring for their own physical needs in order to be accepted into the public schools.

There were 1,725 cases. Among other things, Saenger found that of people with less than 40 I.Q., 65% were never institutionalized. As in Fernald's study, he found most often that families explained the need for institutionalization as: 1) a necessary response to difficult behavior; 2) a need for protection of other family members, namely other children; and, 3) an outcome of the death of parents.

The subjects of the study averaged five years in public school. And, most families regarded the school years as "good ones". About half of the families found their severely retarded members able to communicate in some limited way. Seventy-five percent of the parents regarded their severely retarded sons and daughters as easy to get along with and "presented no major difficulties". Sixty-one percent of younger retarded persons were said to have friends. This was true for only thirty-one percent of the older retarded (over 30). Twenty-seven percent had jobs. "An additional nine percent had previously worked but are now without a paid job" (Saenger, 1957, p. 166).

Interestingly, of those who had jobs, 3% were at home, 10% in workshops, 2% in "sheltered environments", and 85% in community work sites, including their own businesses (17%), a parent's business (10%), friends' and relatives' businesses (6%), and private business or industry (52%). The types of employment included: sweeps, dusts, cleans (24%); dries, washes dishes, helps with food (7%); baby sitting (2%); sewing, weaving, knitting (1%); messenger service, deliveries (36%); loading, unloading, helps moving (14%); cutting, folding, light store work (12%); sorting, simple assembly jobs (15%); and, other unskilled labor, e.g., sanding furniture, throwing switches, light assembly work (10%). And, 90 percent of those who held jobs said that they took pride in the fact that they worked.

Saenger's study was probably the most extensive research project on the experiences of severely retarded persons during the 1930-1950's time period. And it tells us, in much greater detail, the same kinds of things which were suggested by Fernald's study: 1) the majority of severely retarded adults were living in the community; 2) only a quarter of them was institutionalized; 3) two-thirds were living in the community; 4) the remainder had died; and, 5) twenty-seven percent was working. Saenger has provided more evidence that severely retarded people were successful in the community, even when there were practically no services available.

Finally, let us look at a third study, Sarason and Gladwin's (1958) analysis of Eaton and Weil's (1955) study of the Hutterites, which reveals evidence similar to the other studies. The Hutterites are a self-contained religious sect residing in the north-central United States and southern Canada. While Sarson and Gladwin found in their review of Eaton and

Weil's work, that there was the expected number of severely retarded persons within the Hutterite Community, the treatment of the severely retarded was somewhat different than in the broader American society. In contrast to the rest of the country, where institutionalization was often foisted on families of the severely disabled and where institutionalization was far from uncommon, the Hutterites never institutionalized a severely retarded family member. When retardation was discovered, the person so classified was taken care of and accepted fully. Extra support was given to the family by the community. In regard to this, it is interesting and instructive to note that most families in the Saenger study complained that they were given little assistance by the community.

That these three studies have had not much effect in terms of stemming the tide of institutional growth is not surprising. Strong ideologies were at work: the growth of professionalism and professional institutions; eugenics and social darwinsim; and the changing, streamlining of the American family. Change would demand more than data. Challenging ideologies were required.

The Hutterites had different beliefs. And so, they responded "differently" to people classified as severely retarded. American policy makers and professionals on the other hand believed institutions were best.

The lesson of our institutional experience, indeed of the continued prevalence of large institutions (Blatt, McNally, and Ozolins, 1978), is that the perception and treatment of people classified as severely retarded are cultural and ideological artifacts and not designs based on scientifically derived truths. Additionally, the ideologies which dominated American life throughout the second half of the 19th century and the first half of the 20th spawned custodial institutions as the preeminent response to people classified as severely retarded. Apart from the provision of institutions, severely retarded people were most often left out of American society.

NEW PERSPECTIVES

Like any other oppressed or, in this case, marginal group, the severely retarded and their allies (e.g., families, friends, advocates) needed a competing ideology, one that could supplant the ideology that characterized them as defective and useless. The seeds of this new ideology came earlier than many today would imagine.

The first public school special class was begun in Providence, Rhode Island in 1896. In 1922, a public school teacher, May Bryne, spoke out for the rights of severely retarded children. The question she raised was: "Did the schools have an obligation to establish classes similar to day nurseries to provide for the severely retarded?" (Thompson, 1963, p. 40).

And in 1925, Dr. Stanley P. Davies wrote in the Journal of Psycho-Asthenics that society, and particularly the mental retardation profession, should make every effort to promote educational and other necessary services in the community: "The axiom upon which modern child welfare work is based, that no child should be separated from his home and his parents until every other resource has been exhausted, applies equally to the mentally defective child. Home care and special class instruction are always to

be preferred to institutional care where they are adequate to meet the needs of the situation" (1925, p. 229).

It would be twenty or thirty years before most states would legislate specific programs for the severely retarded -- many state constitutions spoke of educating all children, but the term "all" was not applied often to those with severe retardation. It would be twenty years before a Federal Court in Pennsylvania would declare education a right for all children. It would be nearly twenty-five years before Congress would pass the Right-to-Education for All Handicapped Children Act (P.L. 94-142).

The complaint that severely retarded persons were being left out of educational and every other community service surfaced again and again. In 1957, Ray Graham, then Director of Special Education in Illinois, spoke, in the same spirit as May Bryne, for the rights of severely retarded children: "I take my stand wholeheartedly in support of this as obligation of the public and private schools". He made a number of other statements to buttress his position. Several of these are as relevant today as they were twenty years ago when he spoke:

> No one has yet explained to me how we will ever know whether the schools can make a contribution to the growth and training of these children unless we give it an honest trial over a period of time. By honest trial, I mean a sincere effort on the part of adequate staff in an appropriate program.
>
> No one has yet convinced me that a baby-sitting program is an adequate school opportunity -- or that a diluted and thin-washed program is worthy of effort by the great professional group of American educators. Yet I fear that some are trying to disprove the values of a program by cheap and unworthy attempts. We can only prove what education will be able to do if we insist on the best of talent and effort.
>
> No one has yet explained satisfactorily to me the theory held by some who are saying that education is designed only for those who can keep pace with a regular academic program that progresses up to and through college preparatory patterns. My belief is that the opportunity belongs to all children.
>
> No one has yet explained to me why, when our state constitutions give every child an educational opportunity, this can be interpreted as "all but severely mentally retarded children". It seems to me that just as children differ in degree and kind, so can the educational prescriptions differ.
>
> ...No one has ever convinced me that training the mind was the only function of education.
>
> No one has explained to me why medical science should be expected to treat all degrees of physical illness including the very sick and the hopeless, but educational science should deny its skills and study to those of very small learning potential. (Graham, 1957)

And finally, Maynard Reynolds was advocating "mainstreaming" of handicapped children into regular classes as early as 1962. The emerging ideology held that all people share certain societal, protected rights, educa-

tion being one of those rights. The severely retarded were viewed in this newly emerging ideology, as full human beings, deserving of rights.

The second ideological thrust that challenged age-old practices of institutional and societal neglect was embodied in the concepts of "normalization" and the "least restrictive alternative".

The term "normalization" seems to have entered the field of human services in 1959, when Bank-Mikkelson, then head of mental retardation services for Denmark, used the term to characterize the policy of permitting retarded people opportunities to live in as normal a fashion as possible. Bengt Nirje elaborated the concept in an important volume published by the President's Committee on Mental Retardation. The volume, entitled Changing Patterns in Residential Care of the Mentally Retarded (Kugel and Wolfensberger, 1969), contains a number of key works, including Blatt's criticism of abuse in institutions, Wolfensberger's history of institutions and their tendency to promote dehumanization, and Nirje's articulation of the principle of normalization.

Nirje described the principle in the following manner: normalization makes "...available to the mentally retarded, patterns and conditions of everyday life which are as close as possible to the norms and patterns of the mainstream of society" (1967, p. 181). At the time, in 1969 and the early 1970's, Bengt Nirje gave numerous public addresses on the central value this principle held for the field of retardation.

One of his favorite examples, to illustrate the concept of normalization, came out of a conference held in Scandanavia, while he was the Executive Director of the Swedish Association for Retarded Children. He described an earlier conference at which retarded persons were asked to make requests for policy changes that might affect their lives. Their requests were consistent with the normalization principle. They asked not to be given special preference in receiving housing referrals (there were housing shortages then as now in Sweden). The retarded people asked, also, not to be taken into town in large groups but rather to be allowed to go into town in groups of two or three. Further, as adults, they asked not to be sent to special camps for the retarded only. They wished to have opportunities for vacations in the regular vacation resorts of Europe, just as non-retarded people do.

In the United States, the normalization principle took hold almost as soon as Nirje and Bank-Mikkelson's words had been heard. That should surprise no one. For, in fact, the principle was merely a conceptualization of certain practices which were becoming popular in the United States during the 1950's and 1960's.

In 1966, David Vail, then Medical Director in the Michigan Department of Public Welfare and, as such, the primary overseer of the State's institutions for persons with mental illness and mental retardation, published a startling book entitled Dehumanization and the Institutional Career, which in effect was a plea for more normalized institutional living space and living patterns. In 1972, the Canadian National Institute of Mental Retardation published what is now regarded as the seminal work on the principle of normalization. It is entitled The Principle of Normalization in Human Services.

Wolfensberger defined the concept more broadly than others, making it a concept that would have applicability to a variety of fields, including mental retardation, mental illness, physical disabilities and so forth: "utilization of means which are as culturally normative as possible, in order to establish and/or maintain personal behaviors and characteristics which are as culturally normative as possible" (1972, p. 28).

The normalization principle places an emphasis on the environment in which people live their lives. It forces us to examine the kinds of social demands upon people. It forces us, for example, to examine the isolating and stigmatizing effects of placing people in large remote institutions. It causes one to question the prudence of educating adult retarded or disturbed people to engage in makework or children's play activities. It allows us to see that much of what has been done to retarded people has confirmed their differentness and precluded their integration into the mainstream organization of society.

Even if one were to find no evidence that people learn better or develop intellectually and socially more quickly as a result of so-called policies of normalization, we would argue the moral superiority of the normalization principle. For we accept and profess the notion that people have a right to be treated in culturally normative ways unless a clear benefit can be shown in some alternative approach, or unless the alternative is chosen freely by the people themselves.

Our commitment to the ideological principle of normalization as a moral position is enhanced by the recent emergence of a parallel concept in the law. Here, we refer to the concept of the "least restrictive alternative". In September of 1970, the State of Alabama cut the mental health budget for that State, forcing cutbacks in staffing of the Bryce State Hospital. That measure led to litigation by the employees who charged that minimum standards of safety and treatment could not be maintained with available personnel.

In August of 1971, the case was expanded to include residents of other mental hospitals in the State and of the Partlow State School, an institution for the retarded. Finally, after several interim orders in which Judge Johnson ordered the State to increase staffing and bring the buildings into compliance with minimum standards of safety and health, the Judge ordered, on April 13, 1972, a final set of minimum standards for treatment of institutionalized residents.

These provisions included a prohibition of institutional peonage, various physical standards for the buildings, minimum staffing requirements, nutritional standards, individualized evaluations and habilitation plans for each resident, guaranteed transitional services for those leaving the institutions, certain measures to create a safe and supportive psychological environment, and, most importantly, the requirement that all residents be given the right to the least restrictive setting necessary for habilitation.

The concept of "least restrictive alternative" provides, as close as we can imagine, the legal equivalent to the principle of normalization. Least restrictive alternative is, like normalization, current, controversial, enigmatic, and manifestly important. It first arose in constitutional law through a corporate dispute. In Shelton v. Tucker (1960), the Supreme Court examined and made a determination on the State's right to legislatively abridge personal, constitutionally-afforded freedoms:

> even though the governmental purpose be legitimate and substantial, the purpose cannot be pursued by means that broadly stifle fundamental personal liberties when the end can be more narrowly achieved. The breadth of legislative abridgement must be viewed in the light of less drastic means for achieving the same basic purpose.

The "least restrictive alternative" concept, then, became applicable to the human services through cases such as Wyatt. Its constitutional applicability, at least for the time being, stops there. But, as is the case with so many constitutional and court-initiated concepts, its usefulness extends beyond the legal sphere.

The courts and constitutional law hold no exclusive rights to the term "least restrictive alternative" (L.R.A.). "L.R.A." has become a frequently cited principle in state and federal legislation affecting a broad range of human service areas, including education, rehabilitation, sterilization, and residential programming. Public Law 94-142, the Right to Education for All Handicapped Children Act, and complimentary state legislation (Chapter 766 in Massachusetts), for example, prohibit the separation of disabled from non-disabled children unless the disabled children cannot benefit from the more normalized or least restrictive setting and program. Similarly, Section 504, the non-discrimination part of the 1973 Vocational Rehabilitation Act, requires that organizations which receive federal funds must adhere to the principle and practice of providing services to the disabled in the most non-separate, least restrictive setting possible. In its broadest use, L.R.A. has become a part of professional, psychological, educational, and planning language. In its day-to-day use, the concept means that the state and its agents who work with disabled people should endeavor to achieve their goals of providing services to those individuals in a manner which least intrudes on the exercise of individual freedoms. In other words, it makes sense, if the state decides to provide vocational training, to provide those services in a manner that least intrudes upon or upsets one's normal life patterns in the community.

L.R.A.'s meaning is fairly clear: limit the intrusion of others upon the individual; and, provide help in a manner that does not oppress. Yet, as a yardstick of practical every-day decision making, it is vague, imprecise, and, actually, not a yardstick at all, in any literal sense.

Like so many broad constitutional principles (e.g., equal protection), L.R.A. is difficult to operationalize. It is as difficult a concept to translate into objective reality as "in the best interests of the child", "appropriate habilitation plan", or "according to reasonable standards". Certain applications of L.R.A. are fairly predictable and accepted. Others are hotly disputed. Perhaps, in part, this is what attracts us to the concept. It is a paradigm through which we can constantly evaluate and re-evaluate our own practice, our models of services.

Since it is a guiding concept and not a yardstick, L.R.A. will derive its meaning over time, through day-to-day applications. In a sense, the term sets up a dialectic in which all are engaged in attempting to discover what would be the least restrictive setting, in a particular situation within a particular set of circumstances.

Twenty years ago, it was thought perfectly appropriate to provide all vocational training for the retarded in sheltered workshops. Today, few people would advocate such a broad-brush approach, particularly in view of its segregationist implications. Still, controversy ranges over the appropriate placement of these severely disabled individuals.

Similarly, other disabled people, particularly the mentally retarded and mentally disturbed, have had little access to some rights, such as the right to enter into a contract, or the right to drive automobiles; in some situations, they have experienced blanket restriction under the law. Such practices now, in light of the dominant normalization ideology and the concept of least restrictive alternative (L.R.A.), seem hopelessly overrestrictive.

The concept of L.R.A. will have meaning, however, as we explore new options, as attitudes are transformed, as technologies develop, and as the commitment to integrated community programming grows. Thus, L.R.A., for all its imprecision, and perhaps because of it, has an important role in the process of change. It is a concept in search of substance. In other words, we will never reach a static point where L.R.A. has been finally defined.

The concepts of rights, normalization and least restrictive alternative mark a sharp departure from the belief in and practice of neglect and custodialism. The concepts challenge not only old ideologies; they challenge today's human service planners and practitioners as well. They suggest that the ability of people to learn and develop, including those individuals with severe retardation, may be much less a product of innate capabilities or inabilities and more a function of the social and educational context in which people find themselves. Through active and sometimes daring application of the new ideological perspectives, we are witnessing programs where: 1) severely retarded children have been successfully integrated with non-disabled peers in school classrooms; 2) severely disabled adults are engaged productively in industrial work situations; and, 3) severely retarded and emotionally disturbed adults are living in rather typical group-home environments.

Ironically, these same programs which have demonstrated so successfully the potential importance of the new ideological perspective cause us to pause and ask, "Is it enough to believe in rights, normalization, and least restrictive alternatives?" "Will these principles optimize the interests of people who have severe retardation?" We think not, at least not alone. Other changes in our societal outlook must also occur if we are to achieve the full fruits of the rights, normalization, and least restrictive principles.

For example, how much social integration can really occur in a "mainstreamed" classroom, if our schools, indeed our society, remains so highly competitive? and to what extent will severely retarded people truly become valued if we as a society evaluate the very worth of people by the amount of intelligence they "possess" or display?

In the world of work, we might similarly ask whether severely retarded adults will find a placement, if we do not extend the notion of rights to include the right to work, the right to education, and the right to live in the community. What we are saying, then, is that the society to which we apply the concepts of rights, normalization, and least restrictive alterna-

tive will need to change in some important ways if we are to achieve the promise that the concepts imply.

We need to emphasize cooperation. One of the instructive lessons derived from Chinese and Scandanavian societies, as well as from some culturally different social environments in this country (Eaton and Weil, 1955; Blatt's view of Camphill, 1978), is that severely disabled people will have greater opportunities for acceptance and productivity where society is less rigid, categorical, exclusive, and competitive.

For example, there is a story frequently told to Western visitors who travel to the People's Republic of China of an elderly disabled man who regarded himself as useless. This man decided that he wanted to make a contribution to the building of a new China. He gathered together scraps of tin cans and made a few turnip graters. These graters were found to be quite useful by the people in his commune. Even though he could not make them as efficiently as a machine, he made them well nevertheless. The moral of the story, as least as the Chinese tell it, is that a man who viewed himself as human waste took pieces of garbage and make them into something useful and, in the process, made himself useful.

The lessons of cooperative work situations, where the opportunity to work and contribute is taken as more important than stark efficiency, are impressive. They cause us to pause and to ask, "Why not establish a 'right to work'?"

When former President Nixon vetoed the Vocational Rehabilitation Act, he argued that it was inflationary and too expensive to rehabilitate those who might not prove sufficiently productive. He said, in effect, rehabilitate those who can use it, those who deserve it: "Its provisions would divert this program from its basic vocational objectives into activities that have no vocational element whatsoever or are essentially medical in character. In addition, it would proliferate a host of narrow categorical programs which duplicate and overlap existing authorities and programs. Such provisions serve only to dilute the resources of the vocational rehabilitation program and impair its continued valuable achievements in restoring deserving [emphasis added] American citizens to meaningful employment" (Memorandum of Disapproval. The White House, Richard M. Nixon, October 27, 1972).

If severely retarded people are to have a place in the working world, we need to consider how we can find ways for them to contribute vocationally. And can that be so hard? After all, it is generally accepted that many tasks, e.g., baking a cake, taking care of children, are done best when they are done by hand. The burden is on society, then, not on those with severe retardation. If Saenger's (1957) finding that 90% of severely retarded persons who work like it means anything at all, it means that people generally want to be contributors.

We conclude, then, that in order to maximize the interests of people with severe retardation, the notion of their rights must be extended to work. Commitments to rehabilitate only those "who deserve it" are no commitments at all.

Measures of potential employability, productivity ratios, and the like are nothing more than new intelligence quotients. They can only have op-

pressive effects. They will divert our energies once again to categorizing. They will perpetuate custodialism, low expectations, and forced exclusion.

They will continue the social policy of leaving severely retarded people out of the American workplace. If we learn nothing else from history, we should learn the importance of ideology in shaping the lives of people. And, if we believe that people with severe retardation can and should have careers, we must adopt an expanded ideology of rights, one that includes the right to work.

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THE CAREER EDUCATION NEEDS OF SEVERELY MENTALLY RETARDED PERSONS

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EDITOR'S NOTE:

In recognition of the special needs of severely mentally retarded persons, Dr. Brolin expands the definition of career education to include the economic, social, and personal fulfillment of this population. Parallel to that which was cited in a previous chapter, he casts the need to implement career education within a developmental approach. Through a broad-based approach such as that, career education topics would be expanded beyond occupational topics to include daily living, and personal-social topics.

Again, this expansion in the career education concept is necessary to accommodate the many developmental needs of individuals who are severely mentally retarded. As background for this necessary accommodation, Dr. Brolin lists a number of obstacles to their vocational normalization. Among other things, these obstacles include questionable vocational assessment procedures, lack of work incentives, and poor or nonexistent accountability of services provided.

In way of elaborating the career education needs of severely mentally retarded persons, Dr. Brolin presents three need areas which he has identified (daily living, personal-social, and occupational) and the career education competencies which he believes are associated with each need area. In doing this, through inference, he demonstrates that there are connections among these career education need areas. Across developmental pathways, these critical connections, then, are the basis for an expanded and elaborated view of career education, since those connections are more easily established and maintained within a non-handicapped population.

Optimally, for each developmental need area, there ought to be an associated service area. For example, if an individual's career development is contingent upon a specific motor performance and that individual is deficient in that skill, then available developmental services should be designed so as to provide skill training in that developmental need area. In this example, one may ascertain easily that career education has a central role because the disabled person needs career information which will provide knowledge relevant to the career decisions which he must make.

Dr. Brolin concludes his discussion of the career education needs of severely mentally retarded persons by pointing out the importance of the outcomes of vocational evaluation to their career education. In regard to evaluation in normal school populations, performance on classroom tests is an indicant to the student of his career status, i.e., a test result is a part of career education, since the student's grade is feedback on how well he is performing during preparation for a career. If we extrapolate our example to handicapped populations and particularly to vocational evaluation, it seems reasonable to conclude that the results of vocational evaluation would be valuable career education information for use by handicapped individuals.

In this chapter, Dr. Brolin establishes clearly the career education needs of severely mentally retarded persons. He makes it clear, also, that their career needs are qualitatively different, when compared to the needs of non-handicapped individuals. The difference in career education needs between these two populations may well be an area for exploration by career education policy planners. Here, at any rate, the depth of that difference is demonstrated vividly.

INTRODUCTION

Since the passage of the Rehabilitation Act of 1973 (P.L. 93-112) and its Regulations in 1977, national attention has turned toward the career development needs of persons with severe handicaps, including those with lower intellectual functioning. The Education for All Handicapped Children Act of 1975 (P.L. 94-142) has hastened educators and rehabilitation workers to re-direct their programmatic efforts toward meeting the needs of these individuals in the least restrictive environment possible. Rehabilitation counselors now report a barrage of referrals of severely and profoundly retarded individuals, something that was unheard of a few short years ago.

Evidence that more collaborative efforts may begin between educators and rehabilitation workers occurred in October 1977, when the Commissioners of the Rehabilitation Services Administration (RSA) and the U.S. Office of Education sent to state directors a "Memorandum of Understanding" which recommended that:

1. handicapped persons eligible for services under the Education for All Handicapped Children Act of 1975, the Vocational Education Amendments of 1976 (P.L. 94-482) and the Rehabilitation Act of 1973, receive all appropriate services for which they are eligible;

2. all agencies administering these laws understand that eligibility under one law should not, in and of itself, result in a denial of complementary services under another of the laws; and,

3. the federal agencies involved are fully committed to aiding state and local agencies engaged in coordinated service delivery for handicapped persons (Insight, December 1977). Shortly thereafter, the Bureau of Education for the Handicapped (BEH) and the Rehabilitation Services Administration (RSA) established a joint work force to develop guidelines on how school districts can coordinate services to handicapped children under the various laws.

Until recently, career education services were practically unheard of for individuals with severe mental retardation. These individuals, defined by the American Association on Mental Deficiency (Grossman, 1973) as those with intelligence quotients from 20-35 and deficient in adaptive behavior, were generally relegated to daily living and recreational instruction at school and, as adults, to the home, day care, or sheltered workshops. Few persons believed that they could become productive members of our society.

The career education movement was officially launched in 1971 by the U.S. Commissioner of Education, Sidney Marland, who chose not to define it. Apparently Marland and his staff wanted it to become an evolving concept and clearly one that was distinguished from vocational education. The first official USOE definition was developed by Hoyt (1975) and the concept was defined as "the totality of experiences through which one learns about and prepares to engage in work as part of her or his way of living" (p. 4). Though unpaid work (volunteerism, homemaking and productive leisure and recreation) was included in this definition, unfortunately, most people seemed to interpret the definition exclusively as a focus on paid employment.

Hoyt (1977), Director of the U.S. Office of Career Education, later redefined it as "an effort aimed at refocusing American education and the actions of the broader community in ways that will help individuals acquire and utilize the knowledge, skills, and attitudes necessary for each to make work a meaningful, productive and satisfying part of his or her way of living" (p. 5). He made it clear that work is paid employment for some individuals and for others it may be the productive use of leisure time, volunteerism or homemaking.

In addition to one's occupational role, many proponents of career education, including myself, believe that one's career should be defined as consisting of many different life roles: avocational, family member, student, retiree, citizen and others. Thus, one's job is only one facet of an individual's career. Viewed in this way, a career is multifaceted and consists of all the roles and positions occupied by individuals during their lifetime. For some handicapped individuals and others, paid work will not necessarily constitute a major part of their careers. Instead, avocational,

family and civic pursuits may constitute satisfying, meaningful and productive careers for them.

Within that context, the purpose of this chapter is to identify and discuss the career education needs of severely retarded persons. From this perspective, career education is defined as: "the process of systematically coordinating all school, family, and community components in order to facilitate each individual's potential for economic, social and personal fulfillment".

The chapter will review some of the more current literature related to this topic, identify major competency needs of these individuals, discuss services needed from various sources, and will present a model by which severely retarded persons can be appropriately evaluated in terms of their career/vocational abilities and needs.

REVIEW OF LITERATURE

As mentioned in the preceding section, severe mental retardation is most commonly defined as having a measured IQ between 20 and 35 and being deficient in adaptive behavior. Often, these IQ measures may be erroneous, according to McDowell and Sontag (1977), who question the prevailing system of defining this low-incidence population. They believe that the severely retarded, defined as above, and being characterized by self-stimulation, self-mutilation, aggression toward others, severe sensory or physical defects, poor communication skills and so on, are conducive to false negatives and false positives, that is, some individuals who are identified as severely retarded may not be and others who are not identified as severely retarded may be. This caution appears quite valid, since severely retarded persons are not a particularly homogeneous group. In the opinion of many behavioral scientists, the severely retarded are sometimes quite diverse in their functional level and potentials.

Karan and Gardner (1973) have reported that individuals with severe handicaps often fail to enter, profit from, and/or successfully exit the vocational rehabilitation system. Further, Bernstein and Karan (1978) believe the problem is that the rehabilitation service delivery system utilizes a model in which clients must either fit into what is available or not receive any services. Unfortunately, what is available is usually incapable of meeting the needs of severely disabled persons. They list the following as significiant obstacles to their vocational normalization:

Inadequate vocational assessment practices. Evaluations are too short, they are directed toward predicting failure, and the assessment tools used have questionable validity and usefulness with severely retarded individuals.

Inadequate community resources. There is a lack of centralized services and/or variation in services to meet the diverse needs of severely retarded persons.

Lack of work incentives. There is little effort to help the severely retarded develop a work ethic and motivation. Loss

of social security, rent subsidies, and medical assistance benefits may reduce their incentive to self-maintenance.

Overprotectiveness. Parents and significant others often do not feel vocational training is realistic for these individuals.

Transportation. Parents and significant others may feel independent travel is impossible for their child and they may promote dependence.

Lack of coordination and cooperation among agencies. In this regard, professional rivalries, territorial rights, theoretical differences and the like are major problems.

Lack of accountability of service providers. Clients are often blamed for unsuccessful efforts, rather than the professionals who deserve the blame.

Bernstein and Karan (1978) recommend that extended vocational evaluation be used, a growth-model approach rather than a predictive one, and that rehabilitation workers become goal setters who use a learning theory approach while serving as agents of change.

The Research and Training Center in Mental Retardation at the University of Wisconsin-Madison is making a concerted effort to develop and demonstrate a vocational rehabilitation research program for severely retarded and other developmentally disabled persons. Labeled the "Crisis Intervention Center" (CIC), the project serves persons who have been declared ineligible for state vocational rehabilitation services or are about to be terminated. Karan (1977a) describes its efforts as being primarily concerned with finding ways to train the severely handicapped person for productive work. A graduated developmental network of habilitation settings are used with a carefully planned behavior-management system. As Karan (1977b) points out, "Programming to meet the vocational habilitation/rehabilitation needs of severely developmentally disabled persons requires a strong commitment to individualized treatment plans, a daily behavior data-base to continually assess the treatment's effectiveness, and a substantial degree of cooperation among the rehabilitation/habilitation community and university resources". (p. 19).

A host of studies are available to support the behavior management approach in teaching severely retarded persons social and vocational skills. Katz, Goldberg and Shurka (1977) trained four persons with IQ scores below 30 to be productive workers in a sheltered workshop. Using task analysis, Freidenberg and Martin (1977) trained two severely retarded students in a hand and machine procedure for stapling labels on plastic bags. Bellamy, Peterson and Close (1975), Hunter and Bellamy (1976), and Brown and Pearce (1970) have demonstrated the ability of severely retarded persons to perform complex assembly tasks. Crosson (1969), Gold (1972), and Tate and Baroff (1967) are investigators who have demonstrated the ability of these individuals to assemble drill machines, bicycle brakes, and relay panels. The literature appears replete with examples of the capability of severely retarded persons when they are properly trained.

Mithaug, Hagmeier and Haring (1977) recommend a programmatic relation between the work specifications of a specific job and the training that is

designed for the client. They believe such coordination will result in vocational training programs which will be more effective because client activities can be directed toward objectives that relate to job placement.

Wehman, Renzaglia and Schutz (1977) list the following as major problems of the severely retarded in developing vocational skills:

Failure to attend to the salient cues (size, color, form) of a task;

Sensory-motor deficits;

Slow motor-behavior, particularly if institutionalized; and,

Interfering or competing behaviors such as distractability and hyperactivity.

They recommend logically arranged sequences of training and behavior management procedures to alleviate these problems.

Wehman (1976) believes an individual's social skills are as important as work skills for vocational success and notes that too little attention has been given to this area. He cites the following as essential for successful training endeavors with the severely retarded:

A task analysis method of presentation;

A high degree of structure and a consistent approach;

Individualized reinforcers;

Carefully gathered data of client work-performance; and,

A number of methods to transfer the training across settings and tasks.

He indicates there is little evidence to date to demonstrate that the severely retarded are capable of competitive employment-level production rates, although it is an investigative area in which he and several others are now presently involved.

In another article, Wehman (1977) stresses the need for severely retarded persons to develop leisure-time skills to enhance rehabilitation efforts. He suggests that these activities enhance home and community functioning and reinforce events that can strengthen work performance, viz., fine motor skills, attending behaviors, and personal-social skills. His research in this area has found that severely retarded adults have strong needs for leisure-time activities and that they often complement time spent in repetitive work activity.

Boyan (1978) expresses concern that rehabilitation efforts for mentally retarded adults stress vocational training and minimize daily living skills, despite their many deficiencies in the latter area. He recommends that programs deal not exclusively with one area but rather to combine both efforts in a total, balanced approach to career development.

Hynes and Young (1976) support the need for personal-social skills development in the severely retarded. In response to their trainable stu-

dents' many questions (e.g., "When can I go to regular school?" "Why don't the kids like me?" "Why does my mother yell at me?"), an adolescent personal growth group was established to help them comprehend their physical and emotional changes. Three study units were developed: 1) feelings and behavior; 2) growing up; and, 3) relationships.

The "feelings and behavior" unit helped the student to identify and define feelings, to learn to express feelings, and to understand the relationship between feelings and behavior. The "growing up" unit helped to develop an awareness of their own maturation, a sense of identify, and to help them understand and consider choices they face as adults. The "relationships" unit assisted them in expressing their feelings about difficult family relationships and to improve personal relationships.

Community colleges have begun serving many handicapped persons in many programs across the country. Thornley (1976) reports that the State of Washington Community College System offers evening courses in Continuing Education for adult retarded students through which they may obtain a high school diploma, improve reading and math skills, become skilled in apartment living, and improve in many other areas of needed life skills. Similarly, the Wiser Institute offers the severely retarded person a vocational program of evaluation and training, developmental and basic academic skills, work adjustment, social adjustment and daily living skills. Physical fitness and recreation training are provided also and are related to getting and maintaining a job and utilizing leisure-time.

This brief review illustrates the considerable activity that is underway relative to meeting the career education needs of severely retarded persons. Researchers such as Tom Bellamy, Lou Brown, Marc Gold, Orv Karan and Paul Wehman are devoting their professional lives to this important area of endeavor. A new national organization entitled "The American Association for the Education of the Severely and Profoundly Handicapped" has been created to promote the welfare of these individuals. While much work remains to be done, in recent years, significant progress has been achieved.

COMPETENCY NEEDS

If we are to be successful in preparing severely retarded persons to reach their potential for community living and working, we must focus our attempts on the total constellation of career education needs of these individuals. I suggest that there are three major categories of needs which must be met if handicapped persons, including the severely retarded, are to be successful in today's rapidly changing society: daily living, personal-social and occupational. In regard to basic academic skills, in the process of learning, they should be taught the twenty-two competencies which comprise the three, identified areas of career education needs.

DAILY LIVING NEEDS

In their career development, there are nine major daily-living skills which handicapped individuals should learn. As well, severely retarded persons can learn certain aspects of each of these competencies. These competencies are discussed below:

1. Managing finances. The severely retarded person can learn to identify money and make correct change to a certain extent. Also, with supervision and guidance, they can be taught to make proper expenditures.

2. Home maintenance. Basic skills may include sweeping, dusting, cleaning and washing household fixtures, furniture and utensils. Household routines and basic tools, such as hammer, saw, screwdriver and wrench can be learned for home improvement work. Outside work such as mowing, raking, trimming, watering, painting and snow removal can be taught. These skills will give the severely retarded a great deal of satisfaction and will help develop abilities which may lead to competitive or sheltered employment.

3. Personal care. This includes learning how to dress and what to wear for different weather conditions, and in social and work settings. Proper grooming and hygiene are essential for peer acceptance, as well as adult, co-worker and employer acceptance. Most severely mentally retarded people can improve their appearance by learning how to keep physically fit, which will aid them in meeting the demands of everyday living and working, as well as in looking and feeling well.

4. Family living. The sharing of responsibilities in the home or in earning a living needs to be learned and practiced. Safety procedures for emergencies such as fire, storm and injury or accident to others need to be learned.

5. Prepare food. Proper eating habits and the use of utensils, both at home and in public eating places, need to be learned. Also to be learned are meal planning procedures for properly-balanced meals and purchase of grocery necessities. The severely retarded person can learn to participate in meal preparation, in after meal clean-up, and in proper food storage.

6. Care for clothes. This includes washing, ironing and storing clothes and performing simple mending operations. Proper selection and purchase of some clothes should be attempted with these individuals.

7. Civic activities. The severely retarded individuals should learn basic laws and how they must be obeyed. They will also need to know their individual rights when being questioned by legal authorities.

8. Recreation and leisure. It is important for severely retarded persons to learn how to interact with others in group activities and games. They need to know how to plan and to choose recreation and leisure wisely by considering such factors as cost, location, travel and how to ask for directions.

9. Transportation. Knowledge of how to go between home and places of employment, and to recreation and health services is very important. They need to know traffic rules, safety practices, how to use public transportation, and how to ask for directions.

Daily living skills are a vital part of career education. These competencies relate to competitive or sheltered vocational functioning, as well as to sustaining oneself in community living. Parent involvement is crucial as educators and rehabilitation personnel work toward making each individual as independent as possible.

PERSONAL-SOCIAL NEEDS

There are seven major personal-social skills which handicapped individuals must have for career development. Severely retarded persons should be capable of the following aspects of these competencies:

10. Self-awareness. The severely retarded need to know about body parts and their unique physical characteristics, so they will develop a positive body image. They need to identify their particular interests and abilities, so that appropriate goals can be established with them. They also need to identify emotions such as happiness, sadness, anger, and how to release their emotions appropriately. They need to become aware of their personal needs and how those needs can be met. This includes their sexual characteristics and future sex roles.

11. Self-confidence. Severely retarded persons need to develop feelings of self-worth. They need to express feelings about accomplishments, successes, and failures in order to build positive feelings about themselves. They need to perceive other persons' reactions toward them and how to handle those reactions. They must learn to take criticism without having their self-worth diminished.

12. Socially responsive behavior. This includes knowing the type of character traits one needs for acceptance by others, e.g., cooperation, cheerfulness, dependability and other traits. What constitutes proper behavior in public places and respect for the rights of others and their property are other important skill areas for these individuals to master.

13. Independence. The severely retarded individual must be taught to assume as much responsibility as possible. They need to learn the process of self-organization, such as getting dressed in the morning and being to work on time. They need to develop goal-seeking behaviors and learn how they can be reached. They need to feel a sense of fulfillment and that they are performing to the best of their ability.

14. Interpersonal skills. This includes how to listen and respond appropriately to other people and how to make friends, keep them, and form close positive relationships.

15. Problem-solving. Being able to differentiate bi-polar concepts such as good and evil, positive and negative, and other concepts are important for severely retarded persons. They need to know where to find good advice in their communities for personal and family decision-making problems that they cannot solve.

16. Communicate with others. Severely retarded persons have the capability to learn and maintain basic functional reading, arithmetic, and writing skills, although, until recently, instruction in these areas was generally missing or very minimal. If they are going to compete for jobs and manage personal affairs, acquisition of as many functional communication skills as possible will be necessary.

Personal-social skills are critical to successful community living and working. They are generally felt to be major deficiencies of most handicapped individuals who are attempting to adjust in the adult world. The competencies in this category are not learned easily. They must be developed early in home and school environments, and they often require considerable rehabilitation effort as the person moves into adulthood.

OCCUPATIONAL NEEDS

There are six major occupational skills that fall into this need category. With the acquisition of sufficient daily and personal-social skills, the severely retarded person's chances of developing competencies in this area are greatly enhanced.

17. Know and explore occupational possibilities. The severely retarded person needs to know that many personal needs and values can be met through work (including unpaid work). They need to learn that differences exist among jobs in regard to wages, hours, and responsibilities, and that there are many different types of jobs available within their communities, some of which they might qualify for someday.

18. Select and plan occupational choices. This includes identifying their major occupational needs, interests and aptitudes and relating them to available and appropriate community jobs.

19. Physical-manual skills. These skills are a necessity for the types of occupational tasks the severely retarded will secure. Included in this category are: balance and coordination, manual dexterity, stamina and endurance, sensory discrimination (distinguish sounds, shapes, sizes and colors).

20. Work habits and behaviors. The major aspects of this competency are: following directions, working with others, working at a satisfactory rate, accepting supervision, attendance and punctuality, meeting quality standards and displaying occupational safety.

21. Occupational skills. The severely retarded person must learn a marketable skill in a vocational training program before competitive employment may become a possibility. This will open the doors of employers and promote consideration of severely retarded persons for employment.

22. Seek, secure and mairtain employment. Severely retarded persons will generally need considerable assistance in seeking and securing employment. To the extent possible, training programs should teach the rudiments of job searching, applying and interviewing. It is important for the person to learn that securing a job does not mean it will be maintained unless performance continues at a satisfactory level. They must also learn about potential problems they might encounter on a job and how to counteract them or seek help.

Occupational skills can be acquired by the severely mentally retarded under proper training conditions. Past research has demonstrated the efficacy of the behavioral management approach and task analysis for developing vocational skills for those individuals. However, sufficient occupational preparation is not enough. Without the daily living and personal-social skills discussed earlier, the individual will still fail.

A more extensive discussion of the twenty-two career education competencies presented here is available in two publications by this writer (Brolin, 1978 and Brolin and Koskaska, 1979).

SERVICE NEEDS

If the career education needs of the severely mentally retarded are to be really met, better cooperative efforts among agencies, organizations, business, industry, and the parents of these individuals must be forthcoming. Territorial rights, professional rivalries, jealousies, theoretical differences, and other problems must be put aside in order that these individuals may be appropriately served. Cooperative efforts and clear roles must be delineated, so that effective services are actually delivered. Severely mentally retarded persons require a great deal of cooperative effort, if they are to be given the opportunity for career development. Some of the major contributions which I feel various agencies and groups can render these individuals are discussed below:

Schools. The school sector will need to incorporate an extensive array of career education concepts into their service delivery system:

1) earlier career awareness, exploration, and skills development;

2) more integration with "regular" students;

3) earlier career guidance and vocational evaluation;

4) more hands-on experience;

5) more emphasis on personal-social skills;

6) a humanistic, democratic environment in which to learn;

7) positive learning experiences and reinforcements; and,

8) a greater commitment to emphasizing the teaching of knowledge and skills which one needs in order to function adequately in society. More involvement with the student's family, community agencies and organizations and the business sector will be required. The use of volunteers should be sought to assist in the extra school-and-community learning activities which education requires. A comprehensive career education curriculum which emphasizes daily living skills, personal-social skills and occupational skills, in addition to basic academic skills, is recommended.

Vocational rehabilitation. The state rehabilitation agency must better accept the fact that the severely mentally retarded are deserving of their services and that many have the capability, when properly trained, of learning productive work, in either a sheltered or competitive work setting. But, they will need a considerable amount of time to learn the skills necessary for successful employment. Other agencies and organizations are available to assist in the financial aspect of training these individuals, too. The rehabilitation professional needs to work more closely with the school in assisting them to develop and conduct meaningful vocational evaluation and training programs. Greater use of the extended evaluation category must occur for the severely retarded individual. Rehabilitation facilities and workshops must be used more extensively, while the individual is in school and thereafter. Vocational rehabilitation counselors are needed to help the school discover potential community jobs and to design curriculum and instructional efforts toward the types of skills needed for these jobs.

Medical services. Because most severely retarded individuals have certain organic involvements and other health problems, physicians, public health nurses, physical therapists, occupational therapists, speech therapists and other medical specialists are needed for competency development and community maintenance. These services will be necessary as the child moves into adulthood.

Social services. Social workers can be extremely valuable in assisting the student for family and community living, including the ability to manage daily affairs, seek proper assistance, and the many personal-social skills needed for independent or semi-independent living. Family counseling and other assistance is a particularly important contribution of this professional.

Recreation services. There are a number of resources for developing this important skill for community living: physical education and special education teachers, parks and recrea-

tion departments, volunteers, family, YMCA and YWCA, Boy Scouts, Girl Scouts and other services. Rehabilitation facilities and workshops should also give considerable attention to this aspect of habilitation programming.

Voluntary organizations. Professional organizations such as the Association for Retarded Citizens, United Palsy, service organizations, and other civic groups can be extremely helpful in developing career education activities and experiences.

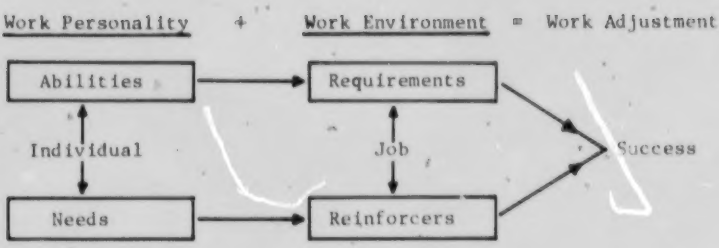
Business and industry. Severely retarded individuals, like anyone else, need to be exposed to a variety of community work-experiences and observations. Business and industry need to have experience with these individuals, too, so that they may learn to appreciate them as human beings and understand that they are worthy of employment considerations. They can help school personnel develop curricula. They can volunteer in school and help to promote career education efforts for the severely retarded throughout the community.

Parents. The retarded person's parents and other family members are crucial in promoting his career development. They need to work closely with school personnel and others who are attempting to help their son or daughter become independent. Parents of the severely retarded are often middle class or above; thus, many have the capability of providing considerable assistance, if they are meaningfully involved by various agencies and given enough direction and consideration.

If these groups can work together closely and respect the contributions and limitations of one another, severely retarded persons will have a much greater chance to realize their potential for a meaningful career.

VOCATIONAL EVALUATION NEEDS

Vocational evaluation is one of the keys to successful career education efforts with the severely retarded. The population presents a unique challenge, since traditional vocational evaluation approaches are of limited usefulness with these individuals. Extended time for and a comprehensive approach to evaluation are necessary to determine their abilities and needs. The Minnesota Theory of Work Adjustment (Lofquist and Dawis, 1969) offers a framework with which to view two important and necessary components in the habilitation efforts of these individuals: the work personality and the work environment. According to the theory, one's work personality consists of the individual's abilities and needs; the work environment consists of the job's requirements and reinforcers. If the individual's abilities are congruent with the job's requirements and if the individual's needs are met by the reinforcer's available on the job, then the individual will be successful on the job. This can be illustrated as follows:



To assess the work personality of the severely retarded, a comprehensive vocational evaluation approach, such as the following, is recommended:

1. clinical assessment;
2. work evaluation;
3. work adjustment; and,
4. on-the-job evaluation (Brolin, 1976).

Extensive attention to each of these four components, not necessarily in the order presented, will be necessary to uncover the various abilities and needs of the individual as they relate to potential competitive or sheltered employment and other career roles. Each of the four components is discussed below:

Clinical assessment. This consists of medical, social, educational and psychological evaluation. It is very important to understand thoroughly the severely retarded person's physical capacity, general health, organic involvement, vision, hearing, speech, perceptual-motor functioning, coordination and any anomalies that may affect career functioning. The importance of the individual's family and their relationships, social skills, interpersonal relationship skills, personal-care skills and the ability to use leisure time are involved in social assessment. Basic academic skills need to be ascertained in order to determine if and what further services are needed. Examples of desirable academic skills for the severely retarded are: recognizing coins and bills, making change, reading signs, simple measuring, and writing key words and sentences. Psychological assessment can help ascertain the individual's verbal skills, performance skills, special interests and knowledge, perceptual-motor skills and personality characteristics. Even more important are realistic recommendations for treatment and training.

Work evaluation. This should consist of intake interviews and counseling, standardized vocational testing, work/job samples and situational assessment. Interviewing and counsel-

ing can reveal any work history, interests, needs, knowledge and goals. Standardized vocational testing will be of very limited value, although some recently developed work evaluation systems, e.g., VIEWS (Vocational Information Exploration Work Samples), TAP (Talent Assessment Program) and WREST (Wide Range Employment Samples Test) have application. Locally developed work samples are probably better indices of vocational interests and aptitudes for these individuals. Situational assessment, i.e., observing the individual on real or simulated work tasks within a group setting, such as sub-contract work in a workshop, is probably the best work evaluation technique for these individuals when done in conjunction with work adjustment.

Work adjustment. This should consist of counseling, individual and group instruction, situational work, behavior modification, and precision teaching. Behavioral counseling, using a humanistic approach, is recommended and can be effective. The severely retarded need to be treated as human beings and given choices in their life, and not be told what they should do. Instruction on getting along with others, interpersonal relationships, grooming and hygiene, and other topics constitute an important part of a work adjustment program. New and appropriate work behaviors and attitudes can be developed through situational work experiences, using behavior modification and precision teaching approaches.

On-the-job evaluation. This component adds the realistic aspect to vocational evaluation that is necessary for most individuals to display their actual work personality. This involves the business and industrial sector in a meaningful relationship with the habilitation program. Several different placements may be needed for severely retarded persons before interests and abilities can be clearly ascertained. A well-organized and supervised set of experiences will be needed.

To assess the work environment, habilitation workers will need to conduct job analyses so that task analysis procedures can be devised for training severely retarded persons in habilitation settings. The task analysis approach, advocated by Karan (1973) and others, appears to be the most definitive and appropriate method of vocational and other career training. It requires the habilitation worker to get to know the community job structure and specific jobs that may be possible for the retarded individual to obtain, upon successful completion of training endeavors.

The above approach, although originally conceived for vocational evaluation, is adaptable to the broader area of career education. If we conduct career/vocational evaluation in this manner, I firmly believe we will begin uncovering potentials of these individuals never before thought possible.

CONCLUSION

Severely retarded persons, until recently, have been relegated to institutions, day care, the home, and, in some cases, sheltered workshop

settings. Only in the past few years has evidence begun to surface which reveals their potential for achieving higher levels of independent and vocational functioning. Negative attitudes and low expectations by professional workers, parents and the general public have worked against any serious attempts to habilitate these individuals. The lack of trained personnel, time needed to habilitate, limited services and staff, architectural and transportation barriers, and the lack of adequate housing have placed further limitations on attempts to habilitate the severely retarded.

There is no denying that severely mentally retarded persons offer a real challenge to professional workers. However, the technology is being developed and becoming available for those who sincerely wish to begin meeting the many needs of these individuals. Most severely retarded persons may not reach an independent living and competitive employment level but they can have a satisfying career within their capacities, if we give them that opportunity; and, in our opinion, that opportunity begins and is carried out through career education.

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DEVELOPMENTALISM AND CAREER EDUCATION: THEIR RELATIONSHIP TO SEVERELY MENTALLY RETARDED PERSONS

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EDITOR'S NOTE:

Expressed in its broadest semantic, career education is a developmental concept. In this chapter, Dr. Sellars presses that point sensitively, yet insistently. In doing that, he states the belief that a developmental premise is needed to provide developmental opportunities to severely mentally retarded persons. Of course, in the context of this monograph, that premise would be focused directly on career education, since career education is considered to be one developmental area within the total developmental experience of each person.

In our work with severely mentally retarded persons, Dr. Sellars suggests that there is a need to evolve a philosophy of development which he has termed "Developmentalism". This "Developmentalism" philosophy could be viewed, then, as a premise for our educational and treatment programs of

the mentally retarded population. In this way, the "Developmentalism" concept would provide a clear focus for our professional endeavors and could become a functional basis from which to measure our professional performance.

Dr. Sellars elaborates this point-of-view by identifying "Developmentalism" as the philosophy of human development and "developmental education" as the technology of human development. In this format, developmentalism is the premise for what is to be done, and developmental education is the set of propositions which support educational practices. In way of illustration, career education may be considered as one of the propositions within developmental education.

Continuing his discussion, Dr. Sellars moves from philosophy and technology into goal setting. In doing this, he identifies "developmental actualization" as the goal of developmental education. In this context, "developmental actualization" means that, through the influences of genetics and culture, it is possible that each individual could attain the goal of optimal development. From this, it seems prudent to assume, also, that when an individual achieves optimal development, that individual consolidates significant gains in self-concept development, i.e., the way in which one values oneself.

INTRODUCTION

Career Education may mean an end to arbitrary institutionalization of persons who are severely mentally retarded, and it can be a major influence on the beginning of developmental programs focused on their career fulfillment. Because of this, if and when career education is made available to severely retarded persons, its impact may be greatest on their needs for early, continuing, and supportive career development.

In way of illustrating those needs, the idea that career education could be beneficial to the severely mentally retarded population may be assumed from a media statement of Lynch (1978): "And what sets them apart is not their appearance or behavior, but the fact that they don't work in a work-oriented society". If we are in agreement with Lynch (1978), then we can conclude that career education is a critical concept in the career development of individuals who are mentally retarded.

Further, what has been occurring in educational programs for mentally retarded individuals was well summarized by Lynch (1978) in another portion of his media statement: "Programs for the severely mentally retarded have...consisted almost exclusively of social-recreational activities like those designed for preschoolers."

From the observations of Lynch (1978) and the experiences of other human services practitioners, we are inclined to believe that there is general agreement within the human services community that the mentally retarded population is in need of developmental programs in career education, career development, and personal development, which is the basis of the other two developmental programs. In practice, though these concepts differ, they are closely related, especially in populations in which normal functioning is constrained, such as the physically and mentally handicapped. Viewed in this way, then, the relationship between personal development, career edu-

cation, and career development is an evolutionary one. For in the development of the individual, each phase follows the other.

Within that evolutionary relationship, personal development may be considered as the basis of career education and career development, since personal development is the behavioral foundation upon which all social development rests. Through these means, career education and career development can be viewed as developmental phases. Thus, they enhance and enrich personal development.

In the same way, career development may be viewed as an extended phase of career education, since it evolves from it. Used in this sense, career education is the "knowing" or "educational" aspect of careers, and career development consists of the "connections among vocational experiences" within a career, and acquisition of appropriate skills, knowledge, and abilities.

CAREER EDUCATION, HANDICAPPED PERSONS, AND DEVELOPMENT

Because of these relationships and their developmental implications, career education must be viewed as a far more critical concept for handicapped persons than for non-handicapped persons. In large part, this criticality is due to social considerations that affect those two groups differently. Criticality of the career education concept is due, also, to the level of inclusiveness ascribed to it by Hansen (1977): "CAREER EDUCATION is a person-centered, developmental ... effort ... to systemmatically promote the career development of all persons...."

From Hansen's (1977) definition of career education and the inferences which one might make from it, it might be concluded that issues such as developmental options, public attitudes, the physical environment, and self-concept considerations are among the many influences which impact handicapped persons in the course of their development. Let us be aware, however, that those influences may interact in such a way as to produce effects that are quite different for handicapped populations than for the non-handicapped.

Developmental options, the first of the influences, is quite different in its effects on handicapped and non-handicapped persons. In the context used here, the concept of developmental options includes all of the developmental pathways which are available to most individuals during the course of their lives. These developmental pathways are in the areas of self development, socialization, recreation, academics, and vocational development (Sellars, 1978a). Within each of these areas, the developmental options differ for the handicapped and non-handicapped individual. In large part, this is due to limited access of handicapped persons to developmental programs and activities, as compared to the ease of access of non-handicapped persons.

Additionally, other important differences between these two groups of individuals are influenced by public attitudes toward them. For example, handicapped persons must deal on a continuing basis with attitudinal barriers, whereas, non-handicapped persons are not subject to such discrimination. Here, attitudes are described as automatic and generalized responses to behaviors, things, and ideas which surround us. Often, individuals who are handicapped find themselves barred from social experiences, solely on

the basis of attitudinal discrimination. Because of this, public attitudes may be a significant influence on the development of handicapped individuals.

Similarly, another social difference between handicapped persons and non-handicapped persons is the accessibility that each group has to the physical environment within which they must live and work. Though there are environmental restrictions which affect everyone, the adverse impact of the physical environment on handicapped persons is far more stressful than on non-handicapped persons.

In the opinion of many behavioral scientists, the social environment is the one significant influence on the development of an individual's self-concept. As expressed here, self-concept is used to mean: "the way in which a person values himself". In regard to this, many practitioners take the position, and it is held by this writer, that self-valuing is a response to the social-valuing of an individual by the significant others within his social network. In large measure, this means that we view ourselves as others view us, particularly those others who play a meaningful role in our development. As a consequence, if others view us negatively, then we will likely view ourselves negatively as well, perhaps even more so.

Therefore, since self-concept development may well be the controlling influence on our exercise of executive functions (valuing, decision making, initiating, etc.), and since our self-concept may well be shaped and developed within the context of our social environment, we might consider closely, then, the idea that individuals who are handicapped may have a more negative self-concept than those who are not handicapped, simply because they are viewed as different or deviant within the social environment and are made aware of this through indirect and direct social communication.

From our review of the social influences which negatively impact handicapped persons, we could assume that their developmental pathways are different, and in specific situations even obstructed. Of course, this would include their career development as well. For this reason, in our opinion, the career education concept should be expanded in its application to include the total development of each handicapped individual, in order to provide alternative, positive social-influences that are developmentally pro-active and pro-human, and thus self-concept enhancing.

In the recent past, the career education concept has been limited somewhat to learning experiences in academics and vocations (Hansen, 1977). In regard to development of the handicapped, however, career education might be more effective, where the concept is expanded to include self-velopment, socialization, and recreation, as well as academics and vocations (Sellars, 1978a). Such an expansion of the concept of career education to that level of inclusiveness would provide increased incentives for developmental initiatives by individuals who are handicapped and by the professionals who serve them.

In regard to this, early and continuing assessment of the social influences that impact handicapped persons negatively would undoubtedly make us aware of their many developmental deficits, since many of these begin during the early childhood developmental period of this group of individuals. Significantly, those deficits range beyond academic and vocational development and, in most cases, include the full spectrum of behavior.

From these considerations, career educators might conclude that a more effective program could be provided to handicapped persons, if the program were broadened to include the full range of human development. If a career education strategy of this kind were undertaken, the concept could be expanded, then, to include all developmental passages through which each of us passes on our way to career and vocational maturity.

Often, due to adverse social contingencies, the developmental passages toward the career and vocational maturity of individuals who are mentally retarded are blocked. For example, historically, both lay persons and many professionals have held the belief that retarded persons were vocationally incompetent (Sellars, 1978b). Lynch (1978) has commented on this: "It has been traditionally assumed that the mentally retarded are capable of only simple, monotonous tasks like sanding wood blocks or stringing beads ...[in contrast to this,] ... our clients have learned to drive tractors, operate pneumatic screwdrivers, and assemble 26-piece flush valve units." In these comments, Lynch has restated, intentionally, the faulty belief that mentally retarded persons "... are capable of only simple, monotonous tasks ..." and he has gone further to show that they, like other workers, can be trained to "... assemble 26-piece flush valve units." These statements tell us that mentally retarded persons can become vocationally competent.

From these considerations, we may conclude that the course of events which brings about social blockages to the career maturity of mentally retarded persons is essentially developmental. And, since career education is in part a developmental process (Hansen, 1977), it could be viewed as integral to the career and vocational fulfillment of handicapped and non-handicapped persons alike. Because of this developmental connection, over the lifetime of individuals, the relationship between career education and human development becomes critical.

For these reasons, we have begun to think in terms of the need for a philosophy and a technology of human development which are global enough to capture all aspects of development, including self-development, socialization, recreation, academics, and vocations. In response to that need, within our studies, we have evolved a global concept of human development which we have termed the philosophy of "Developmentalism", and the educational technology which springs from it has been termed "Developmental Education". Further, it is our belief that these philosophic and technological concepts can serve well as educational vehicles for the delivery of career education, at all levels of instruction.

DEVELOPMENTALISM

"Developmentalism" is a philosophy of human development. It is the study of "why", "how", and "when" people change. The philosophy is inclusive of all aspects of human development. It is the study of the movement and change of individuals and groups, including unidimensional and multidimensional behaviors, the simple and the complex.

Developmentalism includes all of nature in its sphere of study. It holds as a tenet that all of nature is in the process of becoming disclosed. In this natural process of change, both animate and inanimate creations are being transformed. And, it is this change and transformation, the essence of human development, that is the subject matter of the philosophy of developmentalism.

Developmentalism is introduced here because of the perceived need of career educators and special educators for an inclusive concept to which they may reference the technical aspects of their work. For example, in the education of severely mentally retarded adults, there are currently a number of technological considerations, such as methods, techniques and processes which are used to effect habilitation. We believe that these should be considered wholistically within a philosophical framework.

Unfortunately, habilitation has not been defined functionally. Because of that, each program specialist who provides habilitation services provides, also, his definition of habilitation. Primarily, this is due to the absence of agreement among specialists in regard to the meaning of the term "habilitation" and other concepts used within human services settings.

As one example of this, we may consider the concept of career education. At its most inclusive level, it means to provide information and skills to individuals and populations in regard to their career development.

There is a difference in function of the career education concept, however, when applied to individuals rather than the group. When applied to group learning, career education is made part of the curriculum. When applied to individual learning, career education concepts are made part of an individual education program.

Since the outcomes of group career education may be quite different from the outcomes of individual career education, the difference between the group focus and the individual focus of career education is critical. In group career education, the educator presents general career information which may be of developmental interest to the entire population. In individual career education, the academic focus is on specific career information for a specific individual, and it is designed to bring about specific developmental changes within the individual.

Further, both group and individual career education programs need long-term, intermediate-term, and short-term orientations. In addition to this, career education is in need of an inclusive and guiding framework. The need for long-term focus of career education concepts has been expressed within career education curricula. Similarly, the intermediate-term focus of career education has been expressed through individual educational plans and their associated objectives. Finally, the need for short-term focus of career education has been expressed through the materials and methods used within career education programming.

Still, even with those temporal orientations, an inclusive concept is needed to which career education can be referenced. Because of this, we believe that the philosophy of "Developmentalism" and its associated technology, "Developmental Education", can serve as guiding concepts for career education programs, since both the developmentalism philosophy and the developmental education technology are goal oriented, within and across the five areas of human development.

THE DEVELOPMENTAL AREAS

The developmentalism philosophy postulates five developmental areas (TABLE 1). They have been identified as self-development, social, recreational, academic, and vocational development (Sellars, 1978a). Self-devel-

opment, the first of these, may be described as mastery of those life skills which contribute to an individual's sense of independence, autonomy, and personal wellbeing (for example, bathing, grooming, and similar life skills). Social development, the second of the five areas, may be described as mastery of those life skills which contribute to the success of an individual in relating to his family, friends, and community (for example, shopping, traveling, social conversation, and similar skills).

TABLE 1

THE FIVE AREAS OF HUMAN DEVELOPMENT

SELF
SOCIAL
RECREATIONAL
ACADEMIC
VOCATIONAL

Sellars (1978a)

In like manner, recreation, the third area of development, may be described as mastery of those life skills which contribute to an individual's sense of wellbeing through play, amusement, or relaxation (for example, square dancing, volleyball, television viewing, and similar skills). Academic development, another of the developmental areas, may be described as mastery of those life skills which are provided through the educational process that is designed to transmit our culture (for example, reading, identification of symbols, counting, and similar skills).

In addition to these, vocational development, the fifth developmental area, may be described as mastery of those life skills which contribute directly to an individual's economic wellbeing (for example, adjustment to work, mastering work skills, using rest periods at work appropriately, and similar skills).

The philosophy of developmentalism states that the five developmental areas are inclusive of all human development. Further, it postulates that from birth to death each person experiences continuing change in each of these areas of development. Also, the philosophy holds that within each individual change occurs both sequentially and simultaneously. This means that one developmental stage follows another, and yet, they are all ongoing at all times, once they have become operable as part of the personality structure.

By this, for example, we mean that self-development begins before social development and social development before recreational development, and so on, as development unfolds. Yet, even though the beginnings of these developmental processes are sequential, they operate simultaneously

as well, in that one follows the other and builds upon the previous ones, even though none of the five becomes inoperable once it is begun, even though a specific developmental area may become limited due to disability.

Additionally, the developmentalism theory states that within the simultaneity of the developmental areas, the developmental processes occur in different proportions during different age-related intervals. For example, within the United States, from age six through age twenty, the proportion of academic development is far greater than the proportion of vocational development. In way of further illustration, from personal experience, one may observe that self-development occurs in major proportion during two age-related intervals of development, the early years, from birth to age six or seven, during which we learn the initial tasks of caring for our personal needs, and the late years, from age seventy through death, when we must learn new ways of caring for our personal needs, due to age-related debilitation. Viewed in this way, the sequentiality and simultaneity of human development may be observed, as each of us passes through and experiences change in our development.

From the inclusiveness implied in the five developmental areas, it may be postulated that the developmentalism philosophy is concerned with the totality of human development. The "actualization" of individuals is part of that totality. In keeping with this view, the actualization concept is treated as a goal of human development and is, therefore, an area of central interest to the developmentalist.

Similarly, developmental education, the educational technology of human development, is another aspect of the philosophy of developmentalism and is an area of major interest to the developmentalist, as well, since it can be employed scientifically to effect the movement of individuals and groups toward the goal of "developmental actualization". Together, "developmental actualization" and "developmental education" comprise the major focus of the philosophy of "Developmentalism".

DEVELOPMENTAL ACTUALIZATION

"Developmental actualization" is the philosophic goal postulated by developmentalists for optimal development of all persons. It is a social goal based upon each individual's biological and environmental determinates (Schell, 1975). Further, developmentalists believe that developmental actualization is the optimal developmental expression that is possible for each individual, during any age-related developmental period. This means that, within acceptable limits of a culture, an individual may develop and attain his natural endowment, and become what it is he was meant to be.

This view of developmental actualization is quite similar to the "actualization" concept adopted by Maslow (1954) and Rogers (1951). Their use of the actualization concept suggested a developmental progression for each individual that was based upon genetic endowment and social influences. That same meaning of the actualization concept is intended in the present usage.

Even though developmental actualization is an idealized, social goal which developmentalists may project for individuals and groups, and which is based upon their assessment of the combined environmental and genetic potentials of individuals, its realization is a personal experience. For

this reason, the role of the developmentalist is to assist each individual in the attainment of his optimal developmental expression. From this, it may be seen that the attainment of developmental actualization by an individual is influenced, in some degree, by the efforts of the developmentalist who specializes in the strategies and procedures of the technology of human development and its philosophy, developmentalism.

THE RELATIONSHIP BETWEEN CAREER EDUCATION AND DEVELOPMENTALISM

The philosophy of developmentalism and the concept of career education share a common focus in regard to the developmental tasks of individuals and groups. They differ, however, in their range of application to those tasks. Whereas career education focuses on the developmental areas of academics, vocations, and basic skills (Hansen, 1977), developmentalism considers those, and includes social- and self-development as well.

This difference in focus is critical in that the developmentalism philosophy deals with all developmental tasks, explicitly, while career education limits itself, justifiably, to those developmental tasks which are specifically referable to gaining and pursuing careers. Because of this difference, the complementarity between developmentalism and career education should be considered: for example, career education is viewed as a meta-level concept, since it assumes developmental competence in the areas of self- and social-development, whereas developmentalism does not make that assumption and treats of the whole person, including all five of the developmental areas.

In essence, then, developmentalism deals with all of human development and career education focuses on the attainment of careers by individuals. This whole to part relationship brings about a complementary articulation of the two disciplines. Through this articulation, developmentalism may be serviceable as a philosophic foundation out of which career education concepts can be extended.

Such a relationship between career education and developmentalism may be both a desirable and fortuitous one, since career education is based generally on developmental principles (Bailey & Stradt, 1973). In reference to the needs of severely mentally retarded persons, the relationship may be even more desirable, since, through observation, that population of individuals, in order to obtain and maintain employment, requires focused skill-instruction in the self, social, and recreational areas. For the severely mentally retarded population, then, career education can become most effective by assuming a "total-development" focus. And, the developmentalism philosophy with its associated technology, developmental education, can provide such a focus for the principles and concepts of career education.

THE DEVELOPMENTALISM MODEL

As a theoretic model, the developmentalism philosophy includes three major components: a goal, developmental education, and the theoretic base (TABLE 2). Developmental actualization, the first of these components, is the goal of the philosophy of developmentalism. As discussed in a previous section of this chapter, developmental actualization means the optimal development of an individual as a function of his heredity and social experi-

Table 2
Developmentalism Model

Sellars (1978a)

ences, including treatment by a developmentalist, when necessary.

Developmental education is the second component of the developmentalism model. The parts of the structure of developmental education include developmental assessment, developmental evaluation, prescriptive curricula, and the professional resources, the developmentalists.

Developmentalists are the professional personnel who carry out developmental education programs. Several professional areas within which developmentalists function include education, counseling, behavioral science, social work, occupational therapy, recreational therapy and other professions that are concerned with application of the principles of human development.

Developmental assessment, the first aspect of developmental education, is an educational process through which educational needs of students are determined. Through this process, assessment of the five developmental areas of human behavior is carried out (Table 1). Within those developmental areas, i.e., self, social, recreational, academic, and vocational development, skill competencies and deficiencies are assessed for each individual. Following the assessment, any deficiencies may be remediated through developmental education programs, based upon empirical findings rather than rational speculation.

Further, developmental education programs are components of prescriptive curricula. These curricula are constructed following developmental assessment. Through assessment, developmental needs and deficiencies are identified, from which developmentalists plan curricula, based upon those deficiencies. These prescriptive curricula contain, then, developmental-education programs that are goal oriented, i.e., specific developmental-education skills are prescribed (Table 3).

Developmental evaluation is the last part of the structure of developmental education. It is aligned closely with developmental assessment. The major difference between the two is time of use. Developmental assessment is conducted prior to implementation of developmental education programs in order to ascertain areas that are in need of development or remediation. The developmental evaluation is carried out during and following implementation of developmental education programs, in order to ascertain skill development of the student that is a result of the programs implemented.

THE THEORETIC BASE OF THE DEVELOPMENTALISM MODEL

The theoretic base, the third component of the developmentalism model, includes eleven supporting theories. Rationally reduced, the eleven theories may be subsumed within three disciplines: education, management, and psychology. An overview of each of the eleven supporting theories is presented in the sections which follow.

Developmental Theory. Developmental theory focuses on the behavioral and physiological changes of individuals and groups over time (Schell, 1975). Of the developmental theories (there are several), the one which may be most appealing to career educators and other developmentalists is that of Erikson (1959). In the theory, Erikson presents eight stages of development which are sequentially experienced by those individuals who pass through each of the stages (not everyone does). The assumption is made

Table 3
Developmental Areas and Program Components

DEVELOPMENTAL AREAS	PERSONAL	FAMILY	COMMUNITY
SELF	TOOTH BRUSHING		
SOCIAL		CARING	
RECREATIONAL	KNITTING		
ACADEMIC			
VOCATIONAL			

PROGRAM COMPONENTS

Goal
DEVELOPMENTAL ACTUALIZATION

Technology
DEVELOPMENTAL EDUCATION

Sellars (1978a)

that before an individual moves from one of these developmental stages to another, he has achieved adequate competency in the skills of the predecessor stage. Thus, his development is in stages, one dependent upon the other.

In regard to development of career education curricula, Erikson's (1959) developmental stages could be used as conceptual guides around which educational programs can be structured. For example, "role diffusion versus ego identity" is one of Erikson's developmental stages. Extrapolating from that stage, the career educator could design educational programs for youth and adults which would be directed at the establishment of and maintenance of "ego identity", as that applies to their career education and development.

Actualization Theory. Acutalization theory is best expressed through a quote of Maslow (1954): "What a man can be, he must be". Maslow views actualization as the individual's need to maximize his potential. Similarly, Rogers (1951) took the same position, clarifying though, that an individual's need to maximize his potential is influenced strongly by that individual's heredity and environmental experiences.

In use of "developmental actualization" as the goal of its philosophy, developmentalism adopted the theory of actualization, as expressed by Maslow (1954) and Rogers (1951). Similarly, actualization theory can serve as the developmental goal of career educators and other developmentalists.

Normalization Theory. Normalization theory states the proposition that human services are delivered most effectively within environments that are as normative as possible (Nirje, 1969; Wolfensberger, 1972). In 1976, the assumed effects of normalization were extended to include social equity, increased treatment benefits, and an increase in the range of options available to special populations (Wolfensberger, 1976).

In regard to career education and other developmental concepts, normalization theory would indicate that program delivery is most effective when it is provided within usual social contexts. For example, workstation experiences in industrial settings can provide real-life career education to members of special populations, just as they now provide those experiences to normal populations. For the developmentalist, the importance of normalization rests in its power to educate non-normal populations within normal environments.

Management Theory. Everything is managed. The very interaction of natural processes brings about a relationship among the elements of nature that is based upon differences in energy available to each element. Differences in energy among the natural elements results in outcomes among them that are consistent, i.e., whenever the same elements of nature, with the same amount of energy, are brought together, the same outcome will occur, if other influences are held constant. These consistent, natural outcomes of the interaction among two or more energy systems may be viewed as natural processes" or "rules of nature", or what has been described as the "natural order".

In nature, it is this dialectical interaction toward "natural order" that is the source of management. In our work to provide developmental programs to severely mentally retarded persons, we must function within that natural order to make the best use of our human, material, and informational resources.

In managing those resources, our efforts will be channeled by the two theoretic bases of management, task directionality and human relationships. Therefore, it is the management of those two aspects of behavior that will produce program outcomes that are effective in the development of mentally retarded persons. Because of that, it is clear that sound management practices are needed for the best outcomes of any organized process (Hersey & Blanchard, 1977).

Instructional Theory. Instructional theory is a first-level extension of management theory, especially within educational contexts. The theory states that instructional models are used best when they are designed to achieve specific learning objectives (Bloom, 1976), and are, therefore, content specific, as well. Related to this, we believe that quality instruction is no more than optimal management of human, material, and informational resources within educational environments (Stallings, 1976). That approach to instructional theory has been adopted for use within developmental education.

Learning Theory. Learning theory is a part of instructional theory, since, in order to construct a wholistic instructional theory, the "instructor" must be aware of variations and consistencies in learning styles of individuals and groups (Brophy & Evertson, 1976). Such knowledge is the basis of learning theory. For, learning theory states that for each learner, there is a best "fit" between his learning style and the content of instruction. For example, we know that the learning styles of children of various ages are quite different than the learning styles of adults (Inhelder & Piaget, 1969). And, it is to learning style differences and similarities that the learning theorist addresses himself.

Task Analytic Technology Theory. Task analytic theory is a type of instructional and learning theory. The theory states that "content-to-be-learned" should be reduced to its various parts at a level within which optimal learning can occur for each learner (Bellamy, Horner, & Inman, 1979). In practice, for all learners, this would mean that some students would learn from "total presentation" of the content while other students would need the content divided into its greatest number of parts. Of course, most learners would fall between those two extremes. Because of this range of instructional options, the task analyst must decide in each learning situation the level of complexity within which the instruction must occur.

Behavioral Theory. Behavioral theory is a learning theory from which instructional programs are developed. Generally, the theory states that life experiences which are reinforced are learned and those which are not reinforced are not learned. In order to add power to an instructional program, then, during the course of instruction, the behaviorist arranges contingencies which are designed to provide optimal reinforcement to the learner (Bellamy, et al., 1979). From this, the probability is increased that learning will occur.

Process Analytic Theory. Process analytic theory states that any phenomena can be scientifically researched through analysis of its process. In terms of developmental theory, this would apply to concepts such as Erikson's (1959) developmental stages and the sub-stages within each developmental stage, since these are behavioral processes. In practice, the process analyst would select a piece of behavior (a behavioral process) and observe that behavior, usually with two or more other observers, in order to establish and describe the many relationships within the behav-

ioral process. The purpose of such an analysis is to discover the influences which control relationships within a process and to gain control over those influences in order to alter the process, if that would be a desirable manipulation in behalf of an individual's or a group's development.

System Theory. System theory states that the universe is one system, with all its parts as subsystems of the one system. From a less global view, in regard to human development, there are two major systems to be considered, the individual as a system and the environment in which he lives as a system. In this context, system theory would examine the relationship between these systems, especially where they significantly influence one another (Miles, 1973). To be sure, the development of an individual is influenced in a major way through his interaction with his environment. General system theory is one approach to studying those interactions. And, through such studies, the developmentalist may uncover meaningful connections, both historic and current, between individuals and environments.

Ecological Theory. Ecological theory deals with the analysis and design of ecologies, i.e., the relationships among organisms within an environment (Barker, 1968). For example, analysis of an ecology will reveal strengths and weaknesses in regard to specific uses of that ecology. Similarly, in human development, it is beneficial to know the strengths and weaknesses of specific ecologies, in order to be able to modify those ecologies for the optimal development of individuals and groups.

In way of clarification, it may be observed that ecological and system analyses and designs are similar in nature. Ecological theory differs, however, in that it focuses most often on a delimited space, rather than on global considerations, e.g., on classrooms or schools, as compared to natural systems, though such systems could be included, if one so chose.

DEVELOPMENTAL EDUCATION PROGRAMS

In Table 4, the developmental education model is presented in more detail. As can be seen in the table, developmental actualization (left-hand column) is the goal of developmental education. The relationship here is straight-forward: developmental education is a beneficial technology only in so far as it is functional in providing educational experiences through which an individual may attain developmental actualization, i.e., become what it is he is able to be, based upon the individual's genetic and social endowment.

According to the developmentalism philosophy, developmental actualization is achieved through skill mastery of the activities-of-life that are components of each developmental area (Table 4). In no way does this mean that all of the activities-of-life must be mastered in each developmental area, since that is an impossible undertaking, due to the infinite number of activities-of-life. It does mean, however, that the normative activities-of-life must be mastered, since these are critical to normative social existence.

We believe that the five developmental areas (Table 4) are inclusive of all behavior and that, together, they are the sum of what is meant by the term "developmental actualization". We believe, further, that skill

Table 4
Developmental Education

	DEVELOPMENTAL AREAS	ACTIVITIES OF LIFE	PROGRAMS	THEORIES
Developmental Actualization	SELF	TOOTH BRUSHING	IDENTIFY BRUSH OBTAIN BRUSH GRASP BRUSH IDENTIFY PASTE OBTAIN PASTE	DEVELOPMENTAL ACTUALIZATION
	SOCIALIZATION	GREETING	IDENTIFY PERSON APPROACH PERSON EXTEND HAND	NORMALIZATION MANAGEMENT
	RECREATION	BOWLING	IDENTIFY ALLEY IDENTIFY PINS IDENTIFY BALL OBTAIN BALL IDENTIFY BALL HAND POSITION	INSTRUCTIONAL LEARNING TASK ANALYTIC
	ACADEMIC	USING TRAFFIC SIGNALS	IDENTIFY SHAPE IDENTIFY SYMBOL IDENTIFY COLOR	BEHAVIORAL PROCESS ANALYTIC
	VOCATIONAL	SAWING	IDENTIFY WOOD IDENTIFY SAW IDENTIFY WORKBENCH OBTAIN WOOD GRASP WOOD POSITION WOOD OBTAIN SAW IDENTIFY SAW HAND POSITION GRASP SAW	SYSTEM ECOLOGICAL

Sellars (1978a)

mastery of the normative activities-of-life is a necessary condition to the developmental actualization of individuals. This point is repeated, for emphasis, because we believe that educational technologies should be goal oriented.

In regard to developmental actualization of individuals and groups, their skill needs can be determined through assessment of the normative activities-of-life within each of the five developmental areas. For example, in Table 4 one can see that "tooth brushing" is a life activity within the "SELF" developmental area. Similarly, "greeting" is a life activity within the "SOCIALIZATION" developmental area. Parallel relationships exist among the other activities-of-life and their respective developmental areas. Assessment of these activities-of-life is the basis for developmental education programs.

Once the relationship between the developmental areas and the activities-of-life is understood, the next important understanding for the developmentalist is the relationship between the activities-of-life and developmental education programs. In way of illustration, a life activity is identified usually by a one- to three-word title: "Disco Dancing" would be an example of one life activity. "Greeting", "Bowling", and "Sawing" would be other examples.

The relationship between these activities-of-life and developmental education programs is one of degree or "level of analysis". For example, activities-of-life are concepts which represent behaviors that include whole and part units of behavior (Sellars, 1976). In way of illustration, return to Table 4 and observe that the life-activity "Sawing" consists of nine smaller units of behavior which could be reduced, themselves, to even smaller units of behavior.

Within developmental education, the number of units of behavior described in a program is functionally derived. This means that the developmentalist describes only that number of units of behavior that are necessary in the instruction of an individual or group. In other words, an instructor should use only those units of behavior necessary to teach the content-of-instruction.

In way of illustrating this, if we return to the activity-of-life "Sawing" and its associated program (Table 4), we can observe that the parts of that program which are described (though incomplete) leave a great deal of discretion to the learner. In other words, no detailed prescription is given, though it could be and must be where the capacity of the learner is low. For example, the present parts of the program could be reduced to even smaller steps, and, then, all steps could be written as detailed learning objectives. When necessary, we believe that the utility of developmental education consists in doing just that.

Developmental education programs, then, consist of the activities-of-life and their elements, which are, themselves, components of each of the five developmental areas of behavior. In this way, developmental education programs (DEP) are designed to effect skill mastery in those activities-of-life that are considered to be a normative part of the individual's development. Beyond this, the final goal of developmental education is to effect the actualization of each individual.

Further, and of central importance here is the notion that developmental education can serve as a program delivery vehicle for career educa-

tion. For example, since the concepts of career education vary in complexity across career types, the technologies of developmental education can be useful in presenting career education information at a level that is optimal for learners. In way of illustration of this, one might find it easier to career educate on the vocation of milkman than on the vocation of atomic physicist, due to different levels of complexity of the two vocations.

In regard to this, it may be seen that several considerations enter into the complexity of career education concepts. First, the cognitive development of the learner must be considered (Inhelder & Piaget, 1969), that is, what is he able to learn at this point in his development? Second, the interest level or motivation of the individual must be considered, that is, even though an individual may have the cognitive development to learn a concept, he may not have the desire.

Developmental education can serve as a vehicle to solve both of those career education issues. In regard to the first, cognitive development, developmental education programs can be designed to present instruction at the level necessary for cognitive acquisition. In regard to the second, interest and motivation, developmental education programs can be designed to increase motivation and interest through fitting, appropriately, the complexity of the learning tasks to the capacity of the learner.

From this approach, it may be observed, also, that cognitive development and motivation interact in the learning situation (Stallings, 1976). By this, we mean that rate of cognitive development is, in some degree, dependent upon learner interest and motivation; and, in some degree, interest and motivation are dependent upon cognitive development.

In summary, developmental education utilizes all facets of the educational process. First, it focuses on the actualization of the learner. Second, from this focus, the developmentalist decides which of the five areas of human development are in need of educational treatment. Third, the developmentalist decides, then, which life activities and associated programs need educational development. Then, the developmentalist designs skill-training activities that will become the programs of developmental education. Within the design, skill-training activities are presented in units of behavior that are appropriate to the needs of the learner. Finally, the developmentalist will analyze and coordinate, appropriately, the relationships between cognitive development and learner motivation and interest. In sum, this educational process is the foundation of the developmentalism philosophy.

THE DEVELOPMENTAL CAREER MODEL

Career education both precedes and is continuous with career development. Because of that relationship, in this section, we present the Developmental Career Model, a model of career development which includes external influences, such as career education, on the career choice of individuals, as well as internal influences, such as genetic endowment. The model consists of six parts: 1) the social environment; 2) general developmental factors; 3) behavioral domains; 4) five developmental areas; 5) specific developmental factors; and, 6) career development. Table 5 displays these interrelated factors, graphically.

Table 5
Developmental Career Model

	GENERAL DEVELOPMENTAL FACTORS	BEHAVIORAL DOMAINS	DEVELOPMENTAL AREAS	SPECIFIC DEVELOPMENTAL FACTORS	
			SELF		
		COGNITIVE			
	EXTERNAL		SOCIAL	OPPORTUNITY	
Social Environment					Career Development
		RELATIONAL	RECREATION		
	INTERNAL		ACADEMIC	ORIENTATION	
		MOTOR			
			VOCATIONAL		

Sellars & Beziat (1979)

Social Environment. In regard to career education and career development, the social environment is primarily a political influence. Because of this influence, several questions should be asked about social environments. For example, what are the political realities within a given social environment? What are its limits of prescription and choice? Who controls career education and career developmental possibilities within the environment?

The answers to those questions are specific indicants of the availability of career education and career development options within a specfic social environment. From history, we know that a few remarkable individuals will rise above their social environment, but most individuals will not; they will function within its limits. For that reason, social environment is a strong predictor of career development (for example, a nation whose economy is agriculturally based will employ most of its citizens in agricultural careers).

General Developmental Factors. Beyond the influence of specific social environments, there are two general developmental factors which influence the career development of individuals, also. These two factors include cultural influences, which are external, and genetic influences, which are internal.

The external cultural-influences on career development consist of the educational and ethical principles of a society. Such principles are the controlling influences placed on the individual to ensure survival of a society and its culture. In this way, the external cultural-influences are related closely to the social environment influence which was discussed in the section immediately above.

The internal genetic-influences on career development include the biological potentialities of the individual. In other words, the career development potentialties of an individual are related closely to the organismic quality of that individual. How those potentialities are expressed as abilities, and how they are related to external cultural-influences are questions which require future study.

At a minimum, through coordination of those internal and external influences, we can appreciate better the relationship between cultural and genetic influences on career development. Due to the general quality of those influences, we refer to them as "general developmental factors."

Behavioral Domains. The cultural and genetic influences on individuals result in specific performance potentialities. These performance potentialties are expressed through three behavioral domains: 1) cognitive; 2) relational; and, 3) motor.

The cognitive behavioral domain expresses skill in mental functions, such as thinking, logic, memory, and mental imagery. The relational behavioral domain expresses the range of emotions and their interactive outcomes among individuals. The motor domain expresses gross and precision movement of the body and its parts in relation to objects or patterns in the environment, e.g., placing a key in a keyhole or disco dancing.

In our view, the three behavioral domains are outgrowths of cultural and genetic phenomena and they are the basis of skill acquisition in the five developmental areas: 1) self; 2) social; 3) recreational; 4) academic; and, 5) vocational. Each of the five developmental areas is dependent upon

the three behavioral domains for its expression.

Developmental Areas. The five developmental areas have been described in another part of this chapter (Table 1). Of importance here is the idea that skill mastery of each of the developmental areas is based on the cognitive, relational, and motor behavioral domains.

Of equal importance, particularly in the areas of career education and career development, is the idea that the five developmental areas are interdependent that is, from birth on, one area is learned before the other, but, once they are learned, development in each continues simultaneously, yet in differing proportions across the areas. Behaviorally then, the developmental areas are both sequential and simultaneous in their unfolding.

In regard to career development, this sequentiality and simultaneity is important, since vocational development is the last in the developmental sequence. In practice, this means that the vocational development area is based on the three behavioral domains. Because of this, vocational development can be viewed as the most complex of the five developmental areas. Once the vocational area matures, however, specific developmental factors interact with that maturity and, subsequently, the skills which result are implemented as a job, and later as a career.

Specific Developmental Factors. Opportunity and orientation are the two specific developmental factors. These two factors interact with maturation of the five developmental areas (Table 5).

Opportunity is the first specific developmental factor. In regard to career development, this means socio-economic opportunity. The course of an individual's career is nearly always dependent upon the socio-economic quality of the society in which he exists. In way of illustration, demand for goods and services affects the career opportunities of individuals. For example, when there is low consumer demand for a particular product or service, career opportunities associated with that good or service will diminish also. Because of that, opportunity is based largely on socio-economic conditions within a specific social environment.

Orientation is the second specific developmental factor. In regard to career development, orientation represents the interest and motivation of an individual to participate in a career. From this, one can see that orientation interacts concomitantly with vocational development, since full vocational maturity is not possible without orientation. If one is to demonstrate career development, one must evidence interest and motivation toward a career.

In this Developmental Career Model, the focus of the specific developmental factors is on vocational development. Yet, those two factors would apply to any of the developmental areas. Since, in any area of development, opportunity and orientation are prerequisite to maturity.

Career Development. Career development may be described as a process of vocational patterning. For example, over a period of time, usually several years, an individual may be employed in any number of related jobs. That person's career may be identified by whatever concept best describes the connections among the individual's positions. In way of illustration, an individual who participates, successfully, in a number of seemingly unrelated business enterprises could be described as an entrepreneur.

Of importance here is the idea that career development is based upon the individual's total developmental history. First, one may observe that part of the individual's history includes his social environment. Second, the developmental history of the individual includes, also, general developmental factors such as external and internal influences. Third, those general developmental factors result, always, in specific skills, in the behavioral domains of cognitive, relational, and motor processes. Additionally, those behavioral domains are skill processes which are utilized within the five developmental areas in order to effect skill mastery within each. Finally, specific developmental factors, such as career opportunity and career orientation, are both environmental and personal factors which influence heavily an individual's career development.

SUMMARY

Career education and career development are far more complex concepts when applied to handicapped persons than to non-handicapped persons. For that reason, we have proposed that career educators consider the philosophy of developmentalism and its technology, developmental education, as vehicles through which to deliver career education concepts.

In presenting the developmentalism philosophy, its theoretic bases were explored. These are numerous and complex and are indicants, therefore, of the difficulty in establishing a comprehensive career education program for handicapped persons. In way of illustrating these ideas, a career and developmental education model was presented that was designed to provide highly individualized instruction to learners.

Finally, a Developmental Career Model was described which illustrates the connections between career education and career development. This model states that career development begins in the social environment and evolves into specific developmental factors which are the culminating influences in an individual's career development.

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A TECHNICAL STRATEGY FOR CAREER EDUCATION & CAREER DEVELOPMENT OF SEVERELY MENTALLY RETARDED PERSONS

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EDITOR'S NOTE:

In career education of the severely mentally retarded, it is most appropriate to ask what the viable career choices are which they must make? In large part, these choices will depend on what skills they are able to acquire. In turn, this rests largely on the instructional modality used. In this chapter, Dr. Stoddard addresses this issue and recommends to the reader that task analytic technology may be the preferred educational modality for accomplishing this.

Dr. Stoddard believes that in career education, as in other educational areas, the power or effectiveness of the learning experience is, primarily, in the instruction. This means that the major influence in the learning experience is invested in the instructional process. Therefore, learning content, methods, processes, motivation, and results are educator responsibilities.

In no other populations of which we are aware is this "educator responsibility for learning outcomes" more relevant than in the severely and profoundly mentally retarded populations, with the possible exception of the mental health and corrections populations. Due to this high "educator responsibility for learning outcomes" within the mentally retarded population, exceptional control over the learning process appears to be indicated. Dr. Stoddard believes that task analytic technology provides that control over the learning process, and is preferred, therefore, in instruction of that population.

From this, it may be concluded that the power in task analytic technology inheres in its systematic treatment of the learning experience. Through this systematic approach, task analytic technology separates the learning experience into three parts: method, content, and process. Within the learning experience, each of these parts interacts with the other two parts. In the following paragraphs, these three parts are described briefly.

The task method, one of the three basic parts of task analytic technology, consists of the variety of ways in which a task can be accomplished. For example, in the task of "putting a key in a lock" there are at least two parts of the task available for method differences. These are the finger-positioning part and the hand-movement part, since both of these parts can be varied as to method. In regard to this, one can see that a key can be held in many different finger positions and, in inserting a key, that hand movement can vary, also, to a considerable degree.

The task content, the second of the three parts of this instructional approach, consists of the steps of the method chosen. For example, the task content for putting a key in a lock might include a step by step description of the finger positioning, hand movement, etc. These parts, then, comprise that task content.

The instructional process consists of that part of the learning experience which describes the way in which the task is taught and other necessary information, i.e., "the instructional plan of action". Note here that the learning experience is expanded to include the instructor, his behaviors and the materials that are needed to provide an effective learning experience. This raises the complexity of the learning experience considerably, since the instructional process must make use of the task-content and method as well.

In his conclusions, Dr. Stoddard states that task analytic technology, i.e., the instructional approach used to teach career-related skills, is a key factor to be considered in the educational process of vocational choice, especially in the career education of severely mentally retarded persons. In other chapters of this monograph, we have reviewed the differences in career education content needed by handicapped and non-handicapped populations. In this chapter, Dr. Stoddard has presented critical training factors related to acquiring competencies and to the career education choice-process itself.

INTRODUCTION

It has been said that having a successful career is simply knowing what to do and then doing it. Certainly, it is true that a person's knowledge and skills, as well as the motivation to use those productively, is what career education is all about. For example, a major goal of the Federal Office of Career Education is to motivate all people to want to work, rather than to just want a job.

Motivation, knowledge, and skills are acquired or developed characteristics. They are not in-born traits. Although obvious, in the case of the severely mentally retarded, this point must be continually stressed. The emphasis must be on finding better ways of training people and training them in more demanding careers -- careers that are more rewarding personally, socially, and financially. This is the underlying premise of the "Developmentalism" model described in another chapter of this monograph (Sellars, 1978). This means that the major challenge in mental retardation is educational, since education is a major aspect of human development.

When most individuals become concerned about their future career, they are dealing largely with questions about which career to choose from a number of possibilities, what knowledge and skills they will need to acquire, and which of many routes they will have to pursue to acquire the necessary body of knowledge and skills.

In regard to careers, the major decisions facing a severely mentally retarded individual are very different. From this, the questions become (1) what could he possibly qualify for? and (2) what knowledge or skills is it possible for a severely mentally retarded person to acquire?

Sadly, I believe that when this second question is asked, it is asked in a traditional educational context. By this, I mean that it is assumed that the person will be exposed to only a traditional training environment, following a traditional philosophy, and using traditional training techniques. The results, obviously, will tend to be traditional.

The severely mentally retarded individual, if he develops any "career" at all, will be involved in only the simplest vocational activity. If this activity were to tap the full capacity of the severely mentally retarded, then I would say, "Job well done!" Since this is not the case, would it not make a great deal of sense, then, to focus our energies on finding and developing more optimistic philosophies of career educating severely retarded persons, which could be coupled with more powerful training techniques?

In this chapter, I would like to give a brief description of what I believe to be one such philosophy and technology -- a strategy for career education and development of severely mentally retarded persons. The strategy I am referring to has been coined the "Try Another Way" approach and was initially developed by Marc Gold at the University of Illinois.

Over the past five years, I and a number of other staff in PROJECT SKILLS at the National Children's Center have been applying and further de-

veloping the technology of "Try Another Way". We have found it to be very effective in helping individuals who find it difficult to learn tasks which heretofore were thought impossible for them. Not only has this experience educated us in terms of the expanded career potential for these people, but it has also had a gradual, yet profound, effect on their apparent perception of themselves and their career involvement.

The "Try Another Way" strategy is a general one. For example, the Marc Gold training films show at least one application of this training strategy in each of the developmental areas listed in the chapter on developmentalism, i.e., self-care, social, recreational, academic, and vocational development (Sellars, 1975).

In addition, at the National Children's Center, we have applied the strategy to several areas of development. As examples of this, we have prepared (1) a general task analysis training manual which applies TAW to electronics (Gibson and Stoddard, 1978), (2) a public transportation travel training manual (Trainer-Reynolds, Johns, and Stoddard, 1977), and (3) a model for setting up a prevocational/life skill program for severely mentally retarded deaf-blind students (Stoddard, Lodi, and Fitzgerald, 1976).

THE "TRY ANOTHER WAY" PHILOSOPHY

We believe that severely mentally retarded individuals should be considered as basically competent and productive. We know that these individuals can learn complex vocational skills. They can and should become part of society's viable work force. We have learned through our experience that if an individual does not perform a task, we cannot say it is because he cannot learn it. We can say only that it is because we don't know how to train him. In other words, learning is mainly a function of available instructional technology, not the learner's so-called "capacity to learn".

In point of fact, what a person learns is probably a function of both intellectual and educational factors. We have found, however, that the most fruitful approach to take is to focus on the strengths of the educational methods, not the weaknesses of the learner. In essence, the trainer and the learner "try another way" until the task is learned. Emphasis is placed on exchanging useful information between the trainer and the learner on how the task is done.

In working this through, the trainer lets the learner know when and how he needs to do something different to complete the task. The learner lets the trainer know when and how he needs more information about how to do the task. The result is the gradual development of a very deep and equal relationship, with shared respect, calm atmosphere, rewarding training sessions, and with an optimal amount of learning taking place.

We see the severely mentally retarded individual as a deeply complex and challenging person with whom to work. He is the type of individual that requires the utmost in competence on our part as trainers. With competent trainers, the severely mentally retarded individual will work hard to learn. In way of results, as the competency of the trainer continues to increase, so will the learner's competency.

We believe that the development of "appropriate" careers for these individuals is an open-ended question. We don't know what they are capable of. Maybe the better question to ask is: "What are we capable of?"

TAW STRATEGY OVERVIEW

By definition, the TAW task analysis training approach is an attempt to determine and implement "all of the activity which results in there being sufficient power for the learner to acquire the task" (Gold, 1977). The term "power" as used here refers to "the amount of intervention, assistance or direction required by the trainer in order for the learner to reach criterion" (Gold, 1977).

Our major focus is on communication or feedback, i.e., "the conveying of discrete pieces of information before, during, and/or after an event or response that lets the learner know what the trainer wants him to do and whether or not he is achieving it" (Gold, 1977).

The TAW technology is divided into two areas. The first is the structure or planning-and-analyzing part of the system. The second is the training guidelines area which has to do with the decision making and actions that take place during the actual training activity.

Structure of Seven-Phase Sequence For Doing Writing, And Refining Task Analyses[1]

> "The decision to teach or not teach any task to the severely/profoundly handicapped must be based on whether or not that task can be analyzed into teachable components rather than on some general feeling about the difficulty of the task."
> (Gold, 1976)

The Seven-Phase Sequence for developing a complete task analysis provides a structure and procedure for analyzing tasks into teachable components. A task analysis contains three parts: first, a description of how the task is to be done, or the method; second, a description of the exact content or steps the learner or trainee must follow to complete a given task; and third, a series of statements indicating all of the instructor's activity which brings about sufficient "power" or effectiveness in the instructional process for the learner to acquire the task.

The seven-phase sequence for doing a complete task analysis is outlined by Gold (1978) as follows:

Phase 1. Decide on Method

Phase 2. Do a Content Task Analysis

[1]This sequence and the rules described in the next section are an abridgement and modification of material presented in the PROJECT SKILLS Task Anayisis Training Manual (Gibson and Stoddard, 1978).

Phase 3. Do a Process Task Analysis

Phase 4. Begin Training

If a decision has been made that the task analysis needs revision, one at a time, work through the last three phases (5 - 7), until the program is effective. There will, of course, be exceptions to this.

Phase 5. Re-do the Process Task Analysis

Question A: Is there additional or alternative feedback that might work?

Question B: Is there a different format that might work?

Phase 6. Re-do the Content Task Analysis, if more power is needed.

Question: How can the part or parts of the task which are not being learned be subdivided into smaller, more teachable components?

Phase 7. Re-do the Method

Question: Is there an altogether different way of doing the part or parts of the task not being learned?

Writing Up Your Task Analysis

There are at least two types of Task Analysis (T.A.) write-ups: A "Short T.A. Write-Up" and a "Complete T.A. Write-Up". A "Short T.A. Write-Up" is comprised of the name of the task, a "Content Task Analysis" (description of each step of the task), and the training criterion. Although unwritten, a "Process Task Analysis" (how and in what order the steps will be taught) is also decided upon when doing a short T.A. write-up. Always do a short T.A. write-up first. Then, after you have had a chance to try it out, write up your complete Task Analysis.

The following outline goes into the seven-phase sequence in detail and provides a guideline for doing a complete T.A. write-up. Follow these guidelines and you will produce Task Analyses that can be used by other trainers. Many trainers, however, have found that after they have written several complete task analyses and have a good working knowledge of the Seven-Phase Sequence and the Training Guidelines, "Short T.A. Write-Ups", which are less time consuming to prepare, are adequate for their day-to-day training needs.

Guidelines for Writing and Refining Task Analyses

Note: In the following outline, the words which are underlined are the suggested headings and statements of a complete T.A. write-up. The words which are not underlined make up the instructions for what is to be included under the various headings.

ORGANIZATION TITLE

NAME OF PROGRAM

TASK ANALYSIS FOR (INSERT NAME OF TASK)

Composite Learner

Describe the population the Task Analysis is written for. Specify entry skills necessary prior to training on the task.

Task Product

Describe the product that will be produced by completion of the task being analyzed. (For example, a printed circuit board with a varied number of dual axial lead electronic components correctly inserted into specified holes.) If the product is a skill rather than an object, this item can be deleted since the skill will be described under Section 1, "Task Method", which follows:

I. Task Method

There is often more than one way or method of performing a task. For example, a dual axial lead component, such as a resistor, can be bent with a pair of pliers or with a parts bender. When writing the method, start with the phrase, "The trainee will be able to ..." Then in one or two sentences describe the task and briefly explain how the task is to be performed (not how to teach the task).

II. Content of Task Steps

The "Content of Task Steps" or "Content Analysis" is similar to the "Method" except that it provides a more detailed picture of the task. Here, the exact steps the learner must follow to complete the task are described.

A. The steps for (insert name of task) are as follows:

Briefly describe each step of the task. Number the steps 1 through _____. When completed this will be a step-by-step sequence indicating everything the learner must do to complete the task. To simplify the decision of the data sheet, decide on an identifying word (which may also be used as a verbal cue for each step, and, indicate them in your description).

EXAMPLE:

"Put In" - the learner switches the part to his right hand and inserts it into the proper holes in the assembly board. The learner then presses the part flush against the board.

B. Other or Optional Steps:

Some task analyses include extra steps for learners who are having particular difficulties or steps for corrections which are faded out at a later time. Indicate these here.

III. Instructional Process

The instructional process describes how the task is taught. It explains what the trainer does to teach the steps to the trainee.

A. Materials:

List all materials required to teach and complete the task. Indicate company and catalog part number of any specialized tools used or provide a separate ordering sheet. Number the materials 1 through _____.

B. Training Set-Up:

Describe the instructor's preparation for training, e.g., where material, equipment and the trainer are positioned. Remember to state that the set-up role of the trainer should be faded as quickly as possible with the learner assuming this function himself.

C. Training Plan:

Describe the order of the presentation of the steps. The following formats can be used.

1. Total Task Presentation: The trainee completes all of the steps each time the task is presented. Errors are corrected as they occur. Total Task Presentation is the training format generally found most useful for tasks taught in PROJECT SKILLS.

2. Backward Chaining: Here the last step in the chain is taught first until it is mastered, then the next to the last step, etc., until the learner has mastered all of the steps. Backward chaining can be done in two ways. At each trial, the trainer can work on only the step the learner is trying to master or at each trial the trainer can first go through all of the steps, leading up to the step the learner is working on.

3. Forward Chaining: Teach the first step until it is mastered, then the second, etc., until all the steps are mastered.

4. Organized Exposure with Feedback: "This format is used for multiple pieces of learning which are not in sequence, for example, social learning. Create an immediate

artificial environment where criterion performance is obtained from the start, then fade the environment to the original." (Gold, 1977a)

When using this format, however, a content analysis amounts to analyzing the different environments rather than the different steps of the tasks. To redo the content analysis see if there are other intermediate environments which need to be added to maintain performance. Then, eventually, fade to an environment where the behaviors occur naturally.

5. Mixed: When you have a long chain of behaviors or tasks, take each component and select the particular training process which fits each portion of the total task.

If the chain of behaviors is short, total task presentation is generally the preferred format. If it is long, select a mixed format. In most assembly work, there are many ways the task can be subdivided and assigned to different learners. For example, if an assembly contains forty-eight parts, divide it into three, sixteen-part tasks, each using the total task format.

If the time per session is short and the task is long, then forward or backward chaining is preferred over a total task format. A chaining procedure is also preferable if a learner gets frustrated easily.

The Training Plan should also indicate if the task should be divided into different levels of difficulty for presentation to the learner. Describe in adequate detail possible variations of the task.

D. Initial Demonstration:

The following statement should be included in each complete, task-analysis write-up. Demonstrate the task at the beginning of the first training session. Also demonstrate correction procedures at this time, by committing an error and then verbally prompting with "try another way" or other appropriate cue(s).

In addition, any instructions specific to the task should be given here.

E. Training Sequence:

Instructor's Actions

First describe any instructional cues or feedback the trainer uses to communicate to the trainee what he wants him to do for each step. Then, for each step, give examples of specific assists used to help the trainee correct an error. Refer to the hierarchy of instructional assists (verbal,

gestural, physical) described in detail in the General Training Instructions. Note the importance of fading. Give examples of verbal phrases used to cue a step. The numbering of each step in the Training Sequence (both instructor's and trainee's actions) should coincide with the numbering given in the "Content of Task Steps".

Trainee's Actions

Elaborate on the steps the learner follows in performing the task correctly. Describe the steps clearly and in enough detail so that a new trainer could perform a task.

F. Data Collection:

The following statement is used for the tasks taught in the SKILLS program and should apply to most write-ups.

Note: The Acquisition Data Sheet (APPENDIX A) is used to record training progress. A sample copy of this data sheet is included. On the lines provided on the left side of the form, write a word or short phrase to identify each step. Show the first step on the bottom line corresponding to the numbers given on the form. Then, complete the second step, and so on.

Begin timing on the first step. Do not time the set-up. Place a diagonal slash (/) through the number of each step completed independently. No mark is made on the sheet for a step requiring instructional assistance. After each trial place a circle around the number of steps completed correctly in the column for that trial. Make a progress graph showing the number of correct steps per trial by connecting the circled numbers.

G. Criterion:

There are two criteria with which the trainer should be concerned. Criterion 1 is the arbitrary point at which the instructor assumes learning has occurred. The Criterion 1 for SKILLS' tasks is measured at the completion of a certain number of consecutively correct trials without instructional assistance. Criterion 2 (which is usually not specified in a task analysis write-up) indicates how well a worker needs to perform on actual production work. This reflects the adequacy of Criterion 1.

Note: Sections IV through VII are not part of the task analysis write-up but are phases of the Task Analysis refining process. Review the Training Guidelines covered in the next section before attempting to refine task analyses.

IV. Train

After writing a task analysis, the instructor should proceed with training. Training serves as the testing ground for a task analysis. After training a number of different workers, the instructor will almost always need to rewrite or revise the task analysis in light of what has been learned. Even after a task analysis has been successfully used in training with a number of learners, a trainer will sometimes find a trainee who is not learning the task following the usual process. The instructor should not conclude that the trainee cannot learn the task. Rather, he should change the task analysis to meet the trainee's needs. For example, a different kind of prompting may have been found helpful or perhaps a step needs to be added or deleted. Occasionally, a new method for completing the task is needed. Phases V, VI, and VII outline this process.

V. Redo the "Instructional Process"

The instructor begins by redoing the Instructional Process (see III). What kinds of feedback or prompting could be used to help the trainee? Perhaps a different format is needed. (See III. C.)

VI. Redo the "Content of Task Steps"

If redoing the Instructional Process is not sufficient, the instructor should examine the Content of Task Steps (see II). Can the steps giving the trainee difficulty be subdivided into smaller, more teachable units? Would additional discrimination, assisting steps be helpful? Remember, when the content is revised, the process must also be revised.

VII. Redo the "Method"

If redoing the Content of Task Steps is unsuccessful, then redo the Method (see I). Is there another way of doing this task? Can a jig or a special tool be used? Can the method be changed so that different discriminations or different motor movements are involved? When the method is revised both the content and the process will need to be revised.

When revising the process or content of a task analysis, in order to meet the needs of an individual trainee or a small group of trainees within the general population, mention these alternative procedures or optional steps, etc., in the "Instructor's Actions" column of the task analysis (see III. E.).

As a final note, remember to follow the admonition to "try another way", in helping the learner acquire the task. Train conscientiously, be willing to make needed changes, incorporate the Training Guidelines presented in the next section and you will find your Task Analysis becoming increasingly more powerful over time.

TRAINING GUIDELINES

The five training rules described in this section have been selected from a set of fourteen training rules presented in the PROJECT SKILLS Task

Analysis Training Manual (Gibson and Stoddard, 1978). The purpose of the rules is to provide the trainer with guidelines for use during training sessions. With practice, the rules will guide a trainer through the moment-to-moment decisions and actions required in the training situation. The rules are not rigid laws and obviously do not cover all training situations. They have, however, been found to be very helpful when working with the severely mentally retarded. Again, with practice they can become invaluable training tools for helping that population develop more rewarding careers.

1. Rule for Timing of Assists

> Assist the trainee at the moment he decides to make an incorrect response, but before he has acted on the decision. (Gold, 1977)

Timing is a critical factor in the successful use of training assists. Giving the right assist at the wrong time decreases its effectiveness. Ideally, assists should not be made while the trainee is still looking for the correct response nor after he has made a mistake. Repeatedly making the correct response with less and less assistance means that the right way to complete a step will become a "habit" over time. In order to assist at the moment of decision, the instructor must observe the learner closely without having his attention distracted. With some tasks it is not feasible to use the "moment of decision" guideline, because the steps happen too quickly, or because errors cannot be observed until they are made. Many verbal responses fall in this category. The trainer can sometimes assist the correction of the error after it has happened. This, too, is not always possible. A lock of hair that is cut too short cannot be "corrected". Usually, then, when an error is completed, the instructor should demonstrate a second time, move in sooner with the proper assistance the next time the step is attempted, or take the learner through the task several times before relying upon less powerful assists.

2. Rule of Diminishing Feedback

> "Each time you correct an error which has been made before, provide enough information to correct the error but less information than the time before." (Gold, 1977)

The instructor must always be conscious of fading out the assistance he gives the trainee. Instructors of the mentally handicapped should avoid giving the trainee too much information; as this keeps the trainee from independent learning and teaches him to be dependent on the instructor. On the other hand, giving too little information or reducing assistance too abruptly assures the trainee will fail to correctly complete the step.

"If you have a prompt that works, don't use it again" (Gold, 1977). Progress is not made when a trainee can only complete a step with a certain prompt. The same prompt or assist should be used no more than a couple of times, otherwise the trainee can become dependent on it. Prompts should be faded out or the type of prompt varied to prevent this from happening.

3. Hierarchy of Instructional Assists

> The hierarchy of instructional assists ranks the different types of assists according to their instructional power. For example, physical assists are more powerful than gestural assists. The hierarchy is

used as a guideline for choosing, adding, and fading out assists according to the amount of power they provide the instructor in training the learner.

Power is defined as "the amount of intervention, assistance, or direction required by the trainer in order for the learner to reach "criterion" (Gold, 1977). Some learners are more capable and will need less power than others. All learners will need less power as they progress. Therefore, the trainer should choose from the hierarchy of assists those assists which will provide sufficient power to bring a particular learner to criterion.

As indicated in Figure 1, the amount of power decreases across the different types of assists, from physical to gestural to verbal. For example, fade from manipulating the learner's fingers, to pointing directly to where the learner's fingers need to go, to giving the learner a one-word verbal assist such as, "insert". Power can also be reduced gradually within each type of assist. For example, within the category of physical assists, taking a trainee's hand and manipulating his fingers around an object gives more information and assistance than gently pushing his hand toward the object. There is overlap in the strength of the different types of assists. For example, pushing a trainee's hand to the correct tool gives him about as much information as pointing within an inch or so of that tool.

4. Rule of Three Assists

Following the hierarchy of assists, increase power as needed, within a given step. After a learner has made three unsuccessful attempts to perform a step correctly, the trainer should intervene with enough assistance to enable the learner to correctly complete the step.

For example, when a learner first begins to make an error by inserting a bolt in the wrong hole, the trainer can intervene with the "try another hole" (verbal assist). This gives the learner the opportunity to check himself and then go ahead and correctly complete the step by himself. If, however, he again makes an incorrect attempt, the instructor can intervene with more power such as pointing (a gestural assist) toward the correct hole. Finally, if necessary, the instructor might point directly (more powerful gestural assist) to the hole which he "knows" will show the trainee what is to be done. The assumption here is that after three incorrect attempts frustration will be avoided and more will be learned from correctly completing the step with assistance than will be learned from further exploratory behavior. In giving these final assists, the instructor must still be conscious of the fading out process as described in the Rule of Diminishing Feedback. This balance of fading out or increasing power over trials, as needed within steps, maximizes the learner's opportunity for independent learning and also allows for the trainer's efficient use of his time and resources.

5. No News is Good News Rule

"When the learner knows that the trainer is attending, no news is good news" (Gold, 1977).

Strongest Assists, giving the trainee the most help and information

fade out assists along this continuum

Physical Assists:

1. The instructor moves the trainee through the correct completion of the step by forming his hand around the trainee's hand and manipulating the hand through completion of the step.

2. The instructor guides the trainee through the step by grasping the trainee's hand or wrist and guiding it through the basic movements required to complete the step.

3. The instructor guides the trainee through the step by placing his hand on the trainee's elbow and applying mild but continuous pressure so as to guide the trainee's hand through the basic movements of the step.

4. The instructor gently taps the trainee's hand into the correct position or toward the correct tool, etc.

Gestural Assists:

1. The instructor points directly to the component, tool or item to be manipulated, etc., involved in a given step.

2. The instructor points within an inch or so of the component, or tool or item, etc., involved in a given step.

3. The instructor points in the general direction of the component, tool or item, etc., involved in a given step.

Verbal Assists

1. The instructor gives the trainee a specific verbal instruction such as "thumb up" or "cutters".

2. The instructor verbally instructs the trainee to make another attempt at a correct response, i.e., "try another place" or "look again".

Weakest assists, giving the trainee the least help and information

FIGURE I: HIERARCHY OF INSTRUCTIONAL ASSISTS

The trainer's undivided attention should communicate silent respect or expectation to the learner that bolsters his confidence. Within a short time, he learns to trust that the trainer will intervene only when he needs help. Phrases such as "Try another way" encourage exploratory and problem-solving behavior. Verbal "reinforcement" such as, "Good boy", "Wow", "Fantastic", and "You're doing a terrific job" are often experienced as demeaning and condesending. When used indiscriminately, they tell the trainee that performance standards are low and his work really isn't something to be proud of.

SUMMARY

In this chapter we have discussed a strategy for career education and development of severely mentally retarded persons. The strategy, coined the "Try Another Way" approach, presents an optimistic philosophy which places heavy demands on the competency of the trainer. The technology of the approach entails two parts. The first part is a seven-phase, planning, implementation, and revision process. The second part is comprised of training rules, i.e., those split-second, decision-making guidelines needed in a training session with a learner who requires a great deal of trainer power to acquire a task.

As this and other powerful approaches for training are adopted, careers will be developed for the severely mentally retarded which we now think of as impossible. Our major challenge is to acquire this vision of career possibilities and to make the commitment to powerful strategies that can make it possible.

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Scoring Code:
- + step done right
- * total steps right per trial (column)
- - step unlearned

ACQUISITION DATA SHEET FOR _____

Unique Task Factors: _____ Learner: _____ Trainer: _____

Criterion: _____ Trials to Criterion _____ Total Training Time: _____

STEPS / Date:																							
24. _____	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
23. _____	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
22. _____	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
21. _____	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
20. _____	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
19. _____	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
18. _____	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
17. _____	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
16. _____	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
15. _____	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
14. _____	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
13. _____	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
12. _____	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
11. _____	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
10. _____	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
9. _____	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
8. _____	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
7. _____	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
6. _____	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
5. _____	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
4. _____	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
3. _____	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2. _____	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1. _____	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Notes:

NCC - SKILLS ACQUISITION DATA SHEET FOR _____

Unqiue Task Factors: _____ Learner: _____ Trainer: _____

STEPS	Date:																									
50. _____	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
49. _____	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
48. _____	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
47. _____	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
46. _____	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
45. _____	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
44. _____	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
43. _____	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
42. _____	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
41. _____	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
40. _____	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
39. _____	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
38. _____	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
37. _____	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
36. _____	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
35. _____	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
34. _____	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
33. _____	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
32. _____	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
31. _____	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
30. _____	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
29. _____	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
28. _____	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
27. _____	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
26. _____	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
25. _____	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25

Notes:

EXPLORATION OF THE NEED FOR A CAREER EDUCATION AND CAREER DEVELOPMENT SPECIALIST PROGRAM IN JOB PLACEMENT

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Dr. Usdane is currently Director, Bureau of Demonstrations and Manpower Development, Rehabilitation Services Administration, Department of Health, Education and Welfare. His leadership in the human services field is focused on community and job adjustment of clients and their post-placement career development. The development of professional personnel in advocacy roles for service in behalf of severely handicapped persons is one of Dr. Usdane's current academic interests. In 1978, Dr. Usdane was honored by the New York University Graduate School as its Alumnus of the Year. Further, Dr. Usdane has served as President of the American Rehabilitation Counseling Association and as President of Division 22, Rehabilitation Psychology, the American Psychological Association. He is noted, also, for his outstanding service to the rehabilitation community throughout the United States and other areas of the world.

EDITOR'S NOTE:

The history of job placement and job maintenance services provided to severely mentally retarded persons is open to considerable criticism. In this chapter, Dr. Usdane suggests a number of ways to remedy many of the deficits within the placement process. In carrying this out, he believes that examination of the adequacy of placement and its allied services should be expanded to placement services for all severely handicapped persons.

From this, one might view the inadequacies of placement services as a set of barriers to optimal vocational adjustment of the severely handicapped population. Foremost among these barriers is the absence of specific training of graduate personnel in job development, placement, and maintenance. Whenever that inadequacy is remedied, other inadequacies in the placement system will be more amenable to change as well.

If inadequate preparation of graduate personnel in placement services is a major barrier to successful career entry of severely handicapped persons, then the non-involvement of business and industry in the placement process must rank as a second major barrier. For example, in demonstration studies in which business has been involved in the placement process, career entry results have been promising.

From this, Dr. Usdane believes that once we can assume that business is sufficiently involved in the placement process and that Career Development Specialists have received adequate professional preparation, we should direct our attention next to the developmental passages of individuals who are severely handicapped. In regard to this, Dr. Usdane cites Erikson's (1959) developmental stage of "industry versus inferiority" as a potential psycho-social developmental crisis of handicapped persons. He believes that a Career Development Specialist should assist the individual who is handicapped in developing sufficient "industry" to enter into a career. In large part, career education may be one means of developing adequate "industry" and "ego-identity" within the population of severely handicapped persons.

Recently, many of these topics have begun to appear in professional journals. Because of this, Dr. Usdane assumes that a trend has begun which will result, at a minimum, in improved communication in regard to the placement requirements of the handicapped population. Communication of that kind may provide career education concepts not only to professionals, themselves, but through them to the populations which they serve.

In addition to developing human resources for the career education of severely mentally retarded persons, Dr. Usdane believes that specific placement materials and learning packages should be developed also. He informs us that the effort to develop these materials is well underway in various settings throughout the country, especially in industry and in institutions of higher education. Much of this programmatic development is being carried out within research and demonstration settings.

In summarizing his major points, Dr. Usdane reminds the reader that the Career Development Specialist is the single, most important variable in the successful career education of severely handicapped persons. Further, he suggests that the professional preparation of the Career Development Specialist should extend beyond traditional educational programs to include learning experiences within the settings of business and industry. Through these means, the career education of severely handicapped persons can be improved and over the long-term made sufficient.

PART ONE: AN INTRODUCTION AND PROPOSAL REGARDING CAREERS

In regard to job placement and maintenance of severely mentally retarded persons, the first consideration of career education is to wean its concepts away from purely educational environments and to implement those concepts in the community and work milieu (Schools Must, 1978). If this is carried through, then the appropriate preparation of severely mentally retarded persons for job placement will be within the work community, where there is job variety and an enriched vocational milieu. Through these means, career education can become an experientially-based curriculum.

In support of this position, higher education has come to the realization that "we must prepare students for work, not jobs" (Feldman, 1978). In order to emphasize this, Feldman (1978) has cited the negative correlation between job opportunities and school enrollments. In recent years, this relationship has become a familiar subject in the popular press, i.e., as job opportunities decline, school enrollments increase.

Through experience, we know that for non-handicapped persons there are fluctuations in the number of available jobs; but for handicapped persons, there is little fluctuation in available jobs. For them, there are always fewer jobs available than those available to non-handicapped persons. In large part, this is due to the many barriers which the handicapped population must face in pursuit of careers.

CAREER BARRIERS

Through recent research studies on job placement for the handicapped (Gannaway & Sink, 1978; Revell & Wehman, 1978; Riggar & Riggar, 1978; and Schalock & Harper, 1978), various barriers in the habilitation and rehabilitation service-delivery system have been identified which impede placement and post-employment adjustment of severely handicapped mentally retarded individuals. Over the next decade, the findings of this research should provide sufficient evidence that quality service-delivery systems for the mentally retarded will eventually come of age in both career education and job placement.

These several barriers to career education, placement, and job maintenance of severely mentally retarded individuals are as follows:

1. The absence of specific professional training of graduate personnel in job solicitation, job placement, and job follow-through.

2. Insufficient utilization of employer job-sites for vocational evaluation of mentally retarded persons.

3. Insufficient use of group job-site assessments, during which abilities, competencies, and interpersonal relationships are evaluated.

4. Insufficient training of and experience in the use of money by severely mentally retarded persons for activities of daily living and in maintaining one's employment.

5. Insufficient training in the use of transportation to and from work, including contingency transportation situations which are outside public transportation systems.

6. From an avocational point-of-view, the lack of understanding and use of community recreational facilities.

7. In relation to self-concept, personal hygiene, and general development, an unawareness of the need for recreational and sports activities.

8. Inexperience with daily - living routines within a "halfway house" or individual, apartment-house living arrangement.

9. Inadequate understanding of appropriate job goals, including such matters as minimal supervision of other mentally retarded individuals, preparation for advancement, and career development.

10. Inexperience in coping with change and other differences occurring in the job situation.

As can be seen, the above list embodies many of the essential characteristics of career education: job advancement, job accommodations, job responsibilities, self-reliance, and general career development on the job and within the community. These ten barriers to the career education and job placement of severely mentally retarded persons were based on a work-evaluation and work-adjustment project conducted in New York City (DHEW, 1960).

Undoubtedly, in addition to these, there are other barriers in the career education process, including barriers in placement and job maintenance. However, many of these barriers are applicable to the non-handicapped population, also, and are, therefore, of less importance here.

MAJOR BARRIERS TO CAREER EDUCATION AND JOB PLACEMENT

Of the many barriers to job placement and job maintenance of severely mentally handicapped individuals, two may be cited as central to further progress in their career development. The first of these barriers is the unavailability of certified professionally trained graduates, who have received field experience and training in the areas of manpower consultation and placement. The second major barrier is the insufficient involvement of industry in development of employment opportunities for mentally retarded persons. In regard to the first barrier, the placement specialist has only very lately been considered worthy of inclusion in specialized long-term training on the graduate level (Usdane, 1974).

Similarly, the inclusion of a manpower consultant on the habilitation team has generally not been carried out, even though he is often the sole professional who is responsible for job development, job placement, and post-employment adjustment of severely mentally retarded individuals. Because of this, the inclusion of career education concepts within the vocational evaluation process has usually been missing, even though, in their reports to the client and the habilitation team, vocational evaluators may have included suggestions concerning appropriate types of jobs.

It is believed by many professional persons that the unavailability of professionally trained and certified placement specialists is the primary cause of both major barriers to job placement and job maintenance. Even beyond that consideration, it is clear that there is no discipline wholly responsible for this area of human services, and, in the end, responsibility tends to be geared to the lowest professional level available. For example,

an individual with interest in obtaining a position within a rehabilitation facility is often given an "entry position" as the "job-placement specialist".

Due to this entry-position status, turnover is rapid, little commitment is engendered in the individual occupying the position, and less credibility is given to him during professional staff meetings. Because of this, unfortunately, the excellent work of professional staff is often compromised through inappropriate job placements, which the untrained, but eager placement specialist has obtained.

The second major barrier to job placement and job maintenance is the lack of involvement of business and industry in the training and preparation of the severely mentally retarded population. For example, work evaluation, assessment, and activity centers include, rarely, business and industry work-stations in their evaluation process. However, there have been a few project demonstrations which have included these evaluations in their process; and, they have produced good results. For increased effectiveness, then, in assisting retarded individuals in gaining and maintaining employment, an alliance between business and vocational evaluation, which could be beneficial to both, might focus upon work-station, vocational-evaluation experiences.

In regard to the two major barriers to job placement, there are signs of change. The recent development of a series of demonstrations, "Projects With Industry" (Usdane, 1978), is focusing on the need for professionalism of the placement specialist and the need for appropriate work-station evaluations within business and industry. For the severely retarded person, these changes could indicate an essential breakthrough in their career education.

The combination of the availability of a trained placement specialist and involvement of business in work-station evaluation could provide increased emphasis to Kenneth Hoyt's (1978) definition of Career Education:

> Career Education is the total effort of public education and the community to help all individuals become familiar with the values of a work-oriented society, and to integrate those values into their lives in such a way that work becomes possible, meaningful, and satisfying to each individual.

If career education is to become a central focus of habilitation programs, a new breed of special educator must be developed, one who is professionally trained to deliver the job placement and maintenance services required by severely handicapped persons, through coordination of the resources available within habilitation programs and the business community. In our early development, we have termed this new breed of professional a "career development specialist".

THE NEED FOR A CAREER DEVELOPMENT SPECIALIST

In the 1980's, the importance of career education and career development will increase. To date, in the field of career education and rehabil-

itation, we have not reached the point at which articles in journals and books emphasize the importance of job development, job placement, job maintenance, career education, and career development. Further, the practice of rehabilitation is more concerned with the possibility of immediate employment, rather than emphasis upon upward mobility within appropriate industrial and business placements.

This phenomenon of immediate employment was seen in a Jewish Vocational Service study (Shulman, 1967). The study, and it was representative of similar studies during the late fifties and throughout the sixties and seventies, was concerned with psychological, social, and vocational diagnostic assessment. At issue was the need for a more appropriate vocational diagnosis that would provide prediction of employment -- immediate employment! In that a relationship between vocational diagnosis and immediate employment was found, the study was successful.

Presently, however, we believe that within the placement process, there needs to be developed a more comprehensive approach, which would include vocational diagnosis, use of work-sample assessment tools, work-study programs within secondary schools, and a variety of occupational information and job visitation approaches, in grades kindergarten through eight.

Further, we believe that an important next step in placement services will be the development of a placement specialist who is an admixture of the special educator and the rehabilitation counselor, and who focuses soley on job placement, or what is now referred to as manpower consultation. Among other things, this admixture would include principles of sales, understanding of job markets, economic forecasting, and personnel practices in business and industry.

In regard to establishing a Career Development Specialist position, however, the two pivotal professional disciplines from which many of its functions would be taken, Special Education and Rehabilitation Counseling, have demonstrated little inclination to form a working alliance. In fact, those disciplines have eschewed any strong relationship. That is significant, since much of the academic content of the career Development Specialist Program would be found within those disciplines. Interestingly enough, however, cooperation and collaboration between those disciplines may or may not have any proven advantage in training professionals in the career education and job placement of severely mentally retarded individuals.

From experience, however, we know that it is easier to establish experimental ventures within existing disciplines, or, at a minimum, with their help. Such an approach has its dangers, since, even within those disciplines, the needs of severely mentally retarded individuals are often ignored or not developed fully. For example, on a professional training level, those aspects of services which are often left unattended are post-diagnostic assessment and post-vocational training. Within a Career Development Specialist curriculum, those areas of placement services would be included. In fact, from a career development standpoint, all training expressed in the curriculum would be for those competencies and experiences which would support the final vocational goal. That specific focus would be the core of an effective curriculum for the Career Development Specialist Program.

TRAINING OF CAREER DEVELOPMENT SPECIALISTS

In regard to training and development of a careers specialist at the university level, information and fieldwork experience in the placement process is usually not included. However, the curriculum may include considerable emphasis upon occupational information, consisting of innumerable pamphlets from the Department of Labor and from a variety of business firms. Currently, however, the placement specialist curriculum includes little information in regard to the placement and follow-up process.

In recent years, in response to this training need, the Rehabilitation Services Administration (DHEW) has provided finanical support to three graduate programs which train placement specialists: Michigan State University, Drake University, and Southern Illinois University. These three programs focus on job development, job solicitation, job forecasting, job placement, and the follow-up process.

Most of these newly developed graduate curricula are supported under the Experimental and Innovative Training Projects program in the Bureau of Demonstrations and Manpower Development (RSA). These "E & I" Training Projects were developed: 1. to add to the rehabilitation team a new professional who could carry through on career development consultation to mentally retarded and other severely handicapped individuals and to assist them in achieving employment expectation-levels which had been raised, due to increased effectiveness of habilitation services, especially vocational evaluation services (Halpern, 1978); and, 2. to develop a graduate curriculum that would bestow professional status upon the placement specialist and the functions carried out by him (Usdane, 1976).

The creation of a career development specialist curriculum could draw upon a large, but as yet unconsolidated, body of related research and demonstration projects which have been conducted by institutions of higher education, agencies providing habilitation services, and professional organizations. Identification and use of these resources will hasten the day when a career development specialist curriculum can be developed and implemented.

PART TWO: A REVIEW OF RESEARCH AND DEMONSTRATION STUDIES IN CAREER DEVELOPMENT

During the past 25 years, numerous research and demonstration studies in the area of career development have been conducted throughout the United States and other industrialized nations. These studies have focused on career education curricula, career development processes, and job placement and maintenance. In this part, specific theories and studies are explored, as well as information which has been reported in professional journals. In the section which follows, psycho-social influences on careers are discussed.

PSYCHO-SOCIAL INFLUENCES ON CAREERS

Within the United States and several European countries (United Kingdom, Germany, Denmark), special projects in rehabilitation continue to make use of the psycho-social principles put forth by Erikson (1959). Those same principles have relevance and application to the career development of severely mentally retarded persons, as well as to the general population.

In 1967, the Jewish Vocational Service of Chicago, in collaboration with Michigan State University, conducted a study based on Erikson's (1959) theories. The study was entitled "The Vocational Development of Mentally Handicapped Adolescents: An Experimental and Longitudinal Study". This study emphasized the position that "for mentally handicapped individuals... the two most critical stages...are those characterized by the psycho-social crises 'industry versus inferiority' and 'ego-identity versus role diffusion'" (Shulman, 1967). As Erikson indicated, these critical stages begin when the individual leaves the protective ambience of his family. It is during this period that the development of an integrated ego-identity is most critical.

An underlying basis of all habilitation facilities is to provide the mentally handicapped individual with the strengths that are necessary to cope with the developmental issues involved in the "industry versus inferiority" polarity. Several projects, including that of the Jewish Vocational Service, have been involved in this, through implementation of treatment strategies for developing client self-concept in the direction of greater "industry". Those treatment strategies have included assessment and individual and group preparation for available and appropriate employment. To be sure, such psycho-social influences on career development are in need of considerable research study, in order to develop and provide information for use in the career education of handicapped persons.

THE JEWISH VOCATIONAL SERVICE PROJECT

One research effort, the Chicago Jewish Vocational Service Project, was an experimental, longitudinal study which focused on the role of the placement process in rehabilitation (Shulman, 1967). The study was an attempt to predict client employability, and it was eminently successful in doing so.

The research population consisted of those clients identified as "high-employability potential" and those as "low-employability potential". From the results of the study, it was evident clearly that placement efforts by the professional staff of the agency or by a professional group to whom clients were referred were non-existent. Since, upon follow-up, no matter to which group the clients were assigned, they obtained their jobs without professional help.

This was illustrated in each of the case histories. Each client had been assessed professionally and for each "high-employability potential" client success had been predicted. Even in this population, though, the

jobs were obtained by the clients, themselves. For example, the "high-employability potential" clients reported that their jobs were obtained in the following ways:

> "The job was acquired through her sister who works for the same company."
>
> "There was no previous work record other than one summer in the Vocational Adjustment Center of the Jewish Vocational Service which she didn't like."
>
> "His previous work experience includes a paper route and working for his father as a painter's assistant."
>
> "She found the job through a neighbor and has held it for one and one-half years."
>
> "He is presently working on a summer job which involves operating machines in a cabinet-making firm."
>
> "She has sought summer employment but without success."
>
> "He is currently employed at Bell and Howell assembling tape recorder mechanisms...he belongs to the 'Y' where most of his contacts are maintained..."

These examples from the "high-employability" potential clients do not show any indication of the utilization of a placement specialist.

Clients who were assessed as "low-employability" subjects were followed up also. From an employment standpoint, their results were clearly less sucessful. Still, those clients were holding jobs not too unlike those in the "high-employability" group. In the follow-up, however, there is no description of any special efforts or use of a placement specialist in obtaining their positions.

In regard to this study, it would be well to keep in mind that the purpose of the study was to predict employability. In this regard, it was successful. Its purpose was not to test the use of a placement specialist in developing career positions or their involvement in the job maintenance of clients. Nevertheless, those functions of the rehabilitation process are in need of critical examination, also.

PLACEMENT INFORMATION THROUGH THE PROFESSIONAL JOURNALS

Other placement information is available through professional journals. Most of the journals are products of professional organizations such as rehabilitation, vocational education, and special education associations. Here, we review several of the journals and their unique contributions.

CAREER DEVELOPMENT FOR EXCEPTIONAL INDIVIDUALS

In the Spring of 1978, publication of Career Development For Exceptional Individuals, the official journal of the Council For Exceptional Children's Division on Career Development, was a step forward by special educators who were concerned with professional approaches to the vocational development of severely mentally retarded persons.

This journal focuses on the nature and substance of career development for severely handicapped persons. In addition to career development projections through the 1970's, the first issue covered career awareness, assessment, and evaluation. Also, sections of the journal entitled Brief Reports, ERIC Notes, Research, and Reviews presented special techniques and projects in regard to work-study approaches and career development innovations. Further, a business enterprise approach for junior and senior high school handicapped individuals was presented, which was designed to prepare this group of individuals for placement. In regard to career education, presentation of unique subject matter of this kind may well be a major strength of the journal of Career Development For Exceptional Individuals.

REHABILITATION COUNSELING BULLETIN

The twentieth year of publication of the Rehabilitation Counseling Bulletin, professional journal of the American Rehabilitation Counseling Association, was celebrated recently through its new publication, Rehabilitation Counseling Theory and Practice (Bolton & Jaques, 1978). This publication included thirty-three articles taken from previous issues in the twenty-year history of publication of the Rehabilitation Counseling Bulletin. The articles dealt with professional issues, individual program approaches, the system approach, rehabilitation research, and professional education.

Strangely enough, in this publication, not one article was involved specifically with the placement process or with a title that included job placement. However, the role of placement was discussed by Muthard and Salamone (1978) in their article entitled "The Future Roles of the Counselor". In the article, the authors indicated that community services for the severely handicapped person should be unified rather than fragmented: "...the work of the integrated program will provide an opportunity for individuals who have high school or junior college preparation to function as placement specialists and expediters of rehabilitation and social services..." (p. 32).

In recent years, scholarly production of journal articles on placement has increased. In 1977, for example, the Rehabilitation Counseling Bulletin devoted its Winter Issue to the placement process, through which it addressed the role and function of placement within the rehabilitation process. One of the articles in that issue, Client-Centered Placement Revisited: A Dialogue on Placement Philosophy, covered different philosophies of the placement process. In regard to severely handicapped individuals, articles of that kind have direct relevance.

JOB PLACEMENT DIVISION

The Job Placement Division is one component of the National Rehabilitation Association. Instead of a journal, it publishes a Newsletter, but

without professional articles, merely announcements. Each year, however, the division invites a presenter to speak at its annual luncheon within the NRA Convention. This presentation, known as the Lou Ortale Lecture, includes professional material by a guest lecturer whose remarks are then printed and circulated within NRA during the current year.

JOURNAL OF APPLIED REHABILITATION COUNSELING

The National Rehabilitation Counseling Association's Journal of Applied Rehabilitation Counseling is in its ninth year of publication. While not dissimilar in style and professionalism to the Rehabilitation Counseling Bulletin, many of its articles include specific reference to the placement process. And, other articles of the journal deal with responsibility and focus on placement as part of the rehabilitation counseling process. For example, in one issue, Perrin (1977) reviewed the need for training adult retarded clients in job-seeking skills. Further, in another issue, the professional responsibility for job placement of the mentally retarded population was discussed and encouraged.

PLACEMENT PROGRAMS AND RESEARCH

In addition to research studies reported in journals, a number of demonstration placement programs and associated research have been carried out, also. In this section, we review several of these which we believe to be of special interest. Our review includes curricula development, projects with industry, and community-based living programs.

CURRICULA DEVELOPMENT

Modular job-placement training packets have been developed by Drake University under the direction of its Placement Specialist and Director, Dr. Howard Traxler. This curriculum gives serious attention to professionalizing the placement specialist position within the habilitation team. The curriculum includes the following content: labor market and job analysis, placement strategies and techniques, job accommodation and modification, and legislative and legal issues. The curriculum has passed the experimental phase and with the support and encouragement of the University will undoubtedly become a permanent part of the graduate curriculum.

Similarly, Michigan State University and Southern Illinois University are experimenting on the graduate level with a placement specialist curriculum. In those curricula, however, the course content tends to be more suited to rehabilitation counselor training than that of a specialized and separate discipline such as the placement specialist. Nevertheless, this notwithstanding, those agencies that are intent upon achieving a professional approach to the placement and follow-up process can make use of these curricula in improving their services.

PROJECTS WITH INDUSTRY

Relatedly, an article by Usdane (1967), in which concern for new horizons in the placement process was expressed, has seemingly come of age. At the time the article was written, it predicted that evaluation processes, including those for severely mentally retarded persons, would connect the

sheltered workshop to the industrial plant. In 1978, we see that this goal has clearly been achieved through Projects With Industry, a program undertaken by the Restaurant Association of America.

Career development and education were a definite part of the protocols of this project. Subsequently, placements through the project included both service and technical types of positions. That was especially pertinent, since the project concentrates on the job placement and follow-up of severely disabled mentally retarded persons.

COMMUNITY-BASED LIVING PROGRAMS

Within a community-based mental retardation program, an unusually perceptive approach to placement was explored by Schalock and Harper (1978). In this demonstration, training sequences were developed for specific services, ranging from independent living to competitive employment. Skills that were required for successful placement were outlined and predictor variables were analyzed to determine the skills required for successful community-living and competitive employment.

Several findings of the study were instructive. For example, follow-up ratings indicated that weekly contacts with clients were sufficient for continued success in independent living. Also, in competitive employment, it was found that far more frequent visits were necessary in order to maintain the clients in job positions. The authors pointed out that the majority of job placements were for mildly and moderately retarded individuals. Even so, it is interesting to note that tested intelligence was not a significant factor in job success (Albin, 1973). Further, job satisfaction was considered a far more important factor.

Like other studies, this one found that the skills needed for independent living were different from those needed in job placement and job maintenance. Once again, problems encountered on the job were related to inappropriate behaviors, lack of initiative, and slowness of work. On the other hand, problems encountered in independent living had to do with money management, cleanliness with the living situation, social behavior, and meal preparation.

The independent living and placement problems identified through this study can provide excellent feedback for use by training programs within work activity centers and rehabilitation centers. From that feedback, strongly structured placement programs can be developed that are based on real job requirements. Further, from these findings, the present writer hypothesizes that with the specialization of the placement worker an adequate job-maintenance, support system can be achieved.

FIELD RESEARCH IN PLACEMENT

In the June 1978 Vocational Evaluation and Work Adjustment Bulletin an unusual perceptive training program leading to competitive employment is described (Revell and Wehman, 1978). The program focuses on the "mini-workshop" concept which combines a pre-job orientation and training program with work stations and real production-based assignments. Other components included in this approach were alteration of the physical environment,

gradual increases in work periods, and realistic reinforcement systems. This training program extends and broadens the work-sample approach and increases the predictive validity of client success within a work setting.

Further, Revell and Wehman (1978) state clearly how severely and profoundly retarded clients can be served effectively by state vocational rehabilitation agencies. It is their thinking that too few retarded clients are given serious consideration for services within schools, rehabilitation facilities, or by rehabilitation counselors. And often, when services are provided, despite specialized work-sample assessments, there is the lack of coordination of prevocational and vocational programs, within available training and employment settings.

In addition, Revell and Wehman (1978) describe specific approaches for direct provision of consultation and evaluation services in special classes within the schools. They believe that, through career education, realistic objectives and longitudinal plans can be developed for individuals who are severely mentally retarded.

Once again, however, the authors note that without trained program and management staff who are "...willing to increase their professional competence..." mentally retarded persons cannot be effectively served. Revell and Wehman (1978) conclude their article by recommending that greater efforts "...be directed toward placing the severely retarded into community employment and industrial workshops".

The authors are clear that state vocational rehabilitation services are needed for the retarded population. They are sure, also, that vocational evaluation and assessment practices have brought about results that can provide successful predictors of employability. What the authors did not say, however, is that appropriately trained placement specialists are needed to provide professional services to the mentally retarded population. If this is not achieved, the present author believes that research studies will continue to show programmatic gaps in job placement and maintenance services.

A study by Riggar and Riggar (1978) parallels that of Revell and Wehman (1978). In the study, the authors describe the role and function of the rehabilitation counselor within an educational setting. They suggest that the counselor should focus on the development of "...abilities that enable successful employment".

In describing this, the authors discuss common problems in placement of the mentally handicapped and the relationship of the rehabilitation counselor to high school work-experience and study programs. Additionally, job retention is given close attention by the authors. Also, emphasis is placed upon skills through which "experienced personnel" can assist students in managing themselves more adequately within the community.

In a later study by Jacobs (1978), it is noted that in America's work-oriented society, the primary "...habilitative goal for retarded adults must be gainful employment". As one means of achieving this in rural areas, Jacobs proposes a model of extended sheltered employment involving retarded adults previously considered as unemployable.

This study described an open environment, sheltered-work program intended for employment of clients who were assessed as very poor candidates for competitive employment. The research supported the notion that the appropriate utilization of rural activities can be successful for this "hard-to-place" handicapped group, the severely mentally retarded.

In conducting the study, little difficulty was found in teaching and learning the required farm skills, including skill acquisition among very low functioning individuals. Requisite job skills included gleaning, harvesting, and similar farm activities. From these successful experiences, the author rebuts Wolfensberger's assertion that contemporary farm situations are seasonal, non-existent, and not particularly economically sound.

In another study by Schreiner (1978), the work of several other investigators who predicted from assessment variables the future work performance of mentally retarded adults was reinforced. In a sample of 127 clients, through factor analysis, they identified a general ability variable which predicted work performance or industrial rate. The three aspects of this general ability factor were described as: visual-motor ability, cognitive ability, and a work-sample or work-sorting ability. Of these, the best predictors of work performance turned out to be simple work-samples related to industrial production rates.

DEVELOPMENT OF PLACEMENT MODELS

In regard to job placement and follow-up, one of the outstanding publications of its time was the DHEA publication, Preparation of Mentally Retarded Youth for Gainful Employment (1959). This publication provided information in regard to placement programs and experiments. Mildly retarded individuals comprised the sample discussed in the publication. The publication reviewed placement topics in schools, rehabilitation facilities, and, beyond this, it presented a series of illustrative programs for the employment preparation of mentally retarded persons. The employment preparation programs represented extremely perceptive methods in job placement and job maintenance. Even now, this publication represents some of the best thinking of the private habilitation sector and is worthy of either re-reading or initial review by those who missed its initial publication.

In a demonstration study by Gardner (1977), community residential alternatives for the developmentally disabled are described; these include topics such as the continuum of care concept, various treatment alternatives, comprehensive evaluation and programming, and care within normalized environments. The relationship of this material to job placement and follow-up is minimal; yet, the deinstitutionalization approach is creative and realistic at the same time. For example, per diem costs are discussed and comparison to state institution costs is presented. In addition, the job-placement material that is discussed includes major behavioral areas and their subdomains, such as work persistence, work routine, work quality, speed and orientation to the job. One unique development in the program was the use of non-professional, direct-care staff supported by a team of professionals. Overall, this program model appears to lend itself to change and expansion. In addition, it provides for behavioral gains by clients and includes an economical cost-structure.

In another research project which took place at the University of Oregon and which included workshop supervision, preparation for job placement was the major dependent variable studied. The research design included methods that sustained maintenance of acceptable client production rates for extended time-periods (Bellamy, Inman & Yeates, 1978).

The experiment took place in the community workshop for severely and profoundly retarded adults. The subjects of the sample had been community residents for approximately ten months. Prior to that, they had been institutionalized for most of their life. Their age ranged from 19 to 26, and their mental age ranged from 2.6 to 3.2.

This was a longitudinal study of eighteen months duration which evaluated the effectiveness of a practical supervision method within an employment setting. The research goal was to identify those combinations of supervision variables that resulted in competent work-behavior. Duration was considered carefully as well as other effects. The major finding was that a supervisor could successfully manipulate constellations of variables related to the work-organization setting. Incidentally, what became evident here was that competent work-supervisors, even with this severely disabled sample, could increase productivity.

In current job-placement research undertaken by the National Center on Employment of the Handicapped, Human Resources Center, Albertson, Long Island, basic techniques, research outcomes, and relationships with business and industry are being examined. In addition to job placement and follow-up of the severely handicapped individual, the Center is specializing in career education, also. In terms of populations and topical areas, the focus of the work at the Center is not only on the severely mentally retarded person but on all severe disability and its relationship to assessment, work evaluation, pre-vocational training, job placement techniques, and job forecasting. From this, the Center has developed specific materials for use in career education programs. These materials include the following instruments and program guides:

Business Needs Assessment
Student Needs Assessment
Parent Needs Assessment
Teacher's Needs Assessment
Business Ventures Format
Business Ventures Description
Business Ventures Plans
Career Education Curriculum

The research program carried out through the Center has been entitled, Programmatic Research on Employment Preparation (PREP). Within the program, four major areas have been selected for investigation: job placement, career education, attitudinal barriers, and independent living.

Within each major area, three phases of research activity will be conducted. These phases will include applied research, pilot-model development, evaluation, and research utilization.

Job Placement was selected for the first year of research effort. During the second year of the project, career education and independent living

studies were initiated. In the career education area, the team completed in-service training programs for middle school teachers, formed and held two meetings of a local advisory committee, produced one hundred career-education activities for middle school students, produced a video-tape demonstration of the career education program, and developed a bibliography of several thousand items.

Similarly, the placement research team has written a strategy paper, prepared an annotated bibliography, and conducted site visits to 18 placement programs. It has surveyed 36 additional placement programs, prepared a monograph on placement practices, assisted in placement training, and formed a placement research steering committee.

Also, for publication in the Winter of 1979, there has been prepared a book on placement topics. Among its twelve chapters, this introductory placement text will discuss follow-up processes and procedures, empirically-based technologies for job placement, job accommodation through job restructuring, environmental modification, linkages between vocational rehabilitation and the world of work, and information problems in the labor market for rehabilitation workers. One of the chapters of the book was authored by Nathan Azrin. For a number of years, he has been involved in a Job Club approach to placement with severely and profoundly mentally retarded individuals within a state hospital in Illinois.

SUMMARY

In the placement and maintenance of severely mentally retarded persons, career education must be vesced, first of all, in a professionally trained member of the habilitation team. If this imperative is ignored, the prevocational process, the evaluation process, and even the carrer education-oriented approach within special education will end with disappointment for the exceptional individual, in that these approaches will not be effective.

In habilitation and rehabilitation, the past history of job placement is filled with disappointing end-results, such as sheltered workshop placements. Mainly, within universities and colleges, that has been due to a total lack of professional training in regard to job development, placement and maintenance. Further, the counseling profession itself has slighted placement as an important area of service for both handicapped individuals and others.

In recent years, through demonstrations and research, private agencies have provided the human services field with whatever placement knowledge is available. For example, work-study programs, projects with industry, and several longitudinal studies in placement have made techniques available that are successful in advancing the state-of-the-art in this highly important area of service delivery.

The future looks bright, however. A few universities are experimenting with graduate training programs in job development and placement of severely mentally retarded persons. Also, business and industry are responding increasingly to Sections 503 and 504 of the Rehabilitation Act of 1973, as amended in 1978, i.e., affirmative action and civil rights for the disabled.

Within the next decade, though, through the untiring efforts of the private sector and with support from various public agencies, career education in the placement and job maintenance of severely mentally retarded persons will come of age. Then, career education will be made sufficient in their behalf.

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